MTI MINISTRY OF TRADE AND INDUSTRY SINGAPORE

ECONOMIC SURVEY OF SINGAPORE 2022

February 2023

Ministry of Trade and Industry
Republic of Singapore

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CONTENTS

MAIN INDICATORS OF THE SINGAPORE ECONOMY

OVERALL ECONOMY

GDP at Current Market Price

2021 $569.4 billion

2022 $643.5 billion

Real GDP (Year-on-Year-Growth)

2021 +8.9%

2022 +3.6%

GNI Per Capita

2021 $87,308

2022 $95,787

STRUCTURE OF THE ECONOMY IN 2022 (% OF NOMINAL VA)

Services Producing Industries 71.3%

Ownership of Dwellings 3.3%

Goods Producing Industries 25.4%

Manufacturing 21.6%

Construction 2.7%

BREAKDOWN OF SERVICES PRODUCING INDUSTRIES

- Wholesale Trade 18.6%
- Finance & Insurance 13.5%
- Transportation & Storage 10.4%
- Information & Communications 5.4%
- Professional Services 5.4%
- Administrative & Support Services 3.0%
- Real Estate 2.9%
- Retail Trade 1.3%
- Food & Beverage Services 0.9%
- Accommodation 0.7%
- Other Services Industries 9.3%

LABOUR MARKET

Employment (as at year end)

2021 3,643.5 thousand

2022 3,897.5 thousand

Overall Unemployment Rate

2021 2.7%

2022 2.1%

Value-Added per Actual Hour Worked

2021 +6.7%

2022 -0.8%

COST

Unit Labour Cost of Overall Economy

2021 +4.9%

2022 +8.5%

Unit Business Cost of Manufacturing

2021 +0.1%

2022 +9.6%

Unit Labour Cost of Manufacturing

2021 +0.4%

2022 +9.6%

PRICES

Consumer Price Index – All Items

2021 +2.3%

2022 +6.1%

Domestic Supply Price Index

2021 +15.2%

2022 +18.6%

Singapore Manufactured Products Price Index

2021 +9.5%

2022 +14.9%

MERCHANDISE TRADE

Merchandise Exports

2021	2022
$614,081 million	$709,967 million
+19.1%	+15.6%

Merchandise Imports

2021	2022
$545,882 million	$655,436 million
+20.4%	+20.1%

Share of Total Merchandise Exports in 2022

53.6% Re-exports

28.1% Non-Oil Domestic Exports

18.4% Oil Domestic Exports

Top Trading Partners in 2022

China

Exports $88.2b
Imports $86.8b

Malaysia

Exports $71.1b
Imports $81.9b

United States

Exports $61.8b
Imports $71.0b

SERVICES TRADE

Services Exports

2021	2022
$358,081 million	$401,544 million
+21.2%	+12.1%

Services Imports

2021	2022
$326,233 million	$356,543 million
+11.6%	+9.3%

Share of Total Services Exports in 2022

34.9% Transport Services

28.7% Other Business Services

13.7% Financial Services

8.0% Telecomms, Computer and Information

4.2% Charges for the use of Intellectual Property

Top Trading Categories in 2022

Transport Services

Exports $140.0b
Imports $127.0b

Other Business Services

Exports $115.1b
Imports $111.5b

Financial Services

Exports $54.9b
Imports $15.5b

CHAPTER

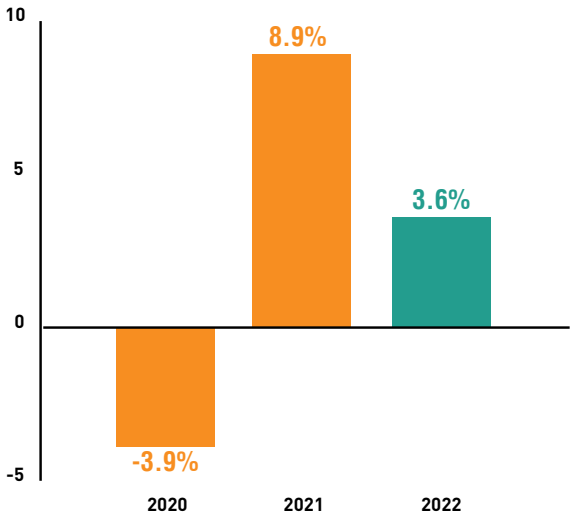
1

ECONOMIC PERFORMANCE

Chapter 1

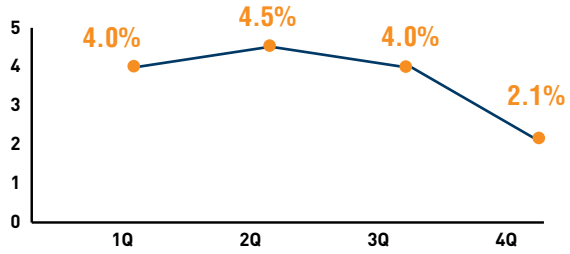
ECONOMIC PERFORMANCE

REAL GDP GREW BY 3.6% IN 2022

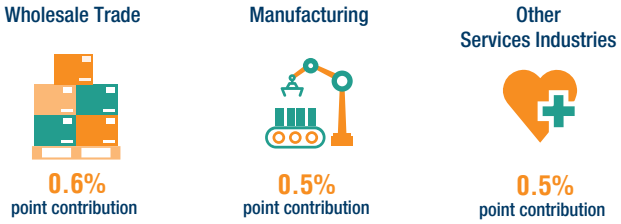


QUARTERLY GDP GROWTH IN 2022

(Year-On-Year Growth)

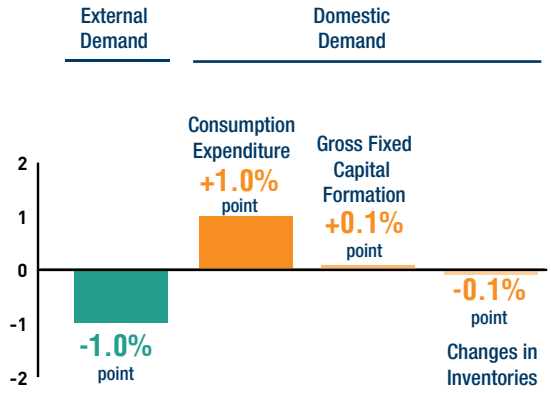


MAIN DRIVERS OF GDP GROWTH IN 2022



INCOME COMPONENTS OF GDP IN 2022

SOURCES OF Ggrowth IN 2022



OVERVIEW

In the fourth quarter of 2022, the Singapore economy grew by 2.1 per cent on a year-on-year basis, moderating from the 4.0 per cent expansion in the previous quarter. All sectors expanded during the quarter, with the exception of the manufacturing and finance & insurance sectors. The sectors that contributed the most to growth during the quarter were the other services, wholesale trade and real estate sectors.

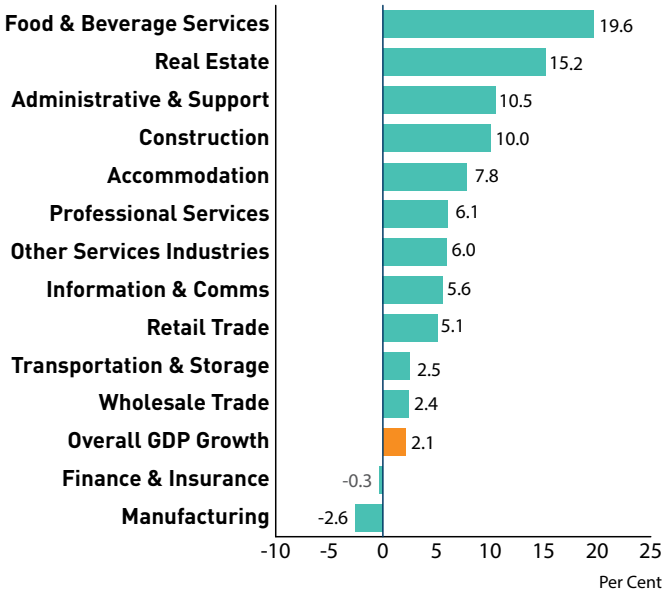
For the full year, the Singapore economy grew by 3.6 per cent, slower than the 8.9 per cent expansion in 2021. All sectors recorded full-year expansions, with the wholesale trade, manufacturing and other services sectors contributing the most to GDP growth for the year.

OVERALL PERFORMANCE

Fourth Quarter 2022

The Singapore economy grew by 2.1 per cent year-on-year in the fourth quarter, moderating from the 4.0 per cent growth in the previous quarter (Exhibit 1.1). On a quarter-on-quarter seasonally-adjusted basis, GDP grew marginally by 0.1 per cent, slower than the 0.8 per cent growth in the third quarter.

Exhibit 1.1: GDP and Sectoral Growth Rates in 4Q 2022



The manufacturing sector contracted by 2.6 per cent year-on-year in the fourth quarter, a pullback from the 1.1 per cent growth in the preceding quarter. All clusters within the sector recorded contractions during the quarter, except for the transport engineering and precision engineering clusters.

The services producing industries collectively grew by 4.0 per cent year-on-year in the fourth quarter, easing from the 5.5 per cent growth in the previous quarter. All services sectors expanded during the quarter, except for the finance & insurance sector, which contracted slightly by 0.3 per cent. Among the sectors that grew, the food & beverage services (19.6 per cent) and real estate (15.2 per cent) sectors posted the strongest expansions.

The construction sector grew by 10.0 per cent year-on-year in the fourth quarter, an improvement from the 8.1 per cent growth in the third quarter. Growth during the quarter was supported by both public sector and private sector construction works.

Full Year of 2022

For the whole of 2022, the Singapore economy expanded by 3.6 per cent, moderating from the 8.9 per cent growth in 2021 (Exhibit 1.2).

By sectors, the manufacturing sector grew by 2.5 per cent in 2022, a marked slowdown from the 13.3 per cent growth achieved in the preceding year. Growth in the sector for the year was supported by output expansions across all clusters, except for the chemicals and biomedical manufacturing clusters.

Services producing industries posted growth of 4.8 per cent in 2022, easing from the 7.6 per cent expansion in 2021. All services sectors registered full-year expansions, with the food & beverage services (18.2 per cent) and real estate (14.1 per cent) sectors recording the fastest growth in 2022.

Meanwhile, the construction sector grew by 6.7 per cent in 2022, extending the 20.5 per cent expansion in the preceding year. Output growth in the sector was supported by an increase in both public and private sector construction works.

Exhibit 1.2: GDP and Sectoral Growth Rates in 2022

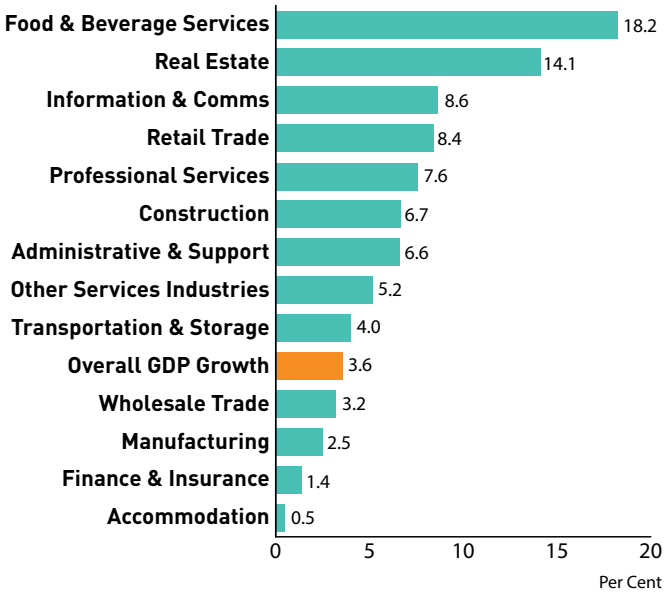
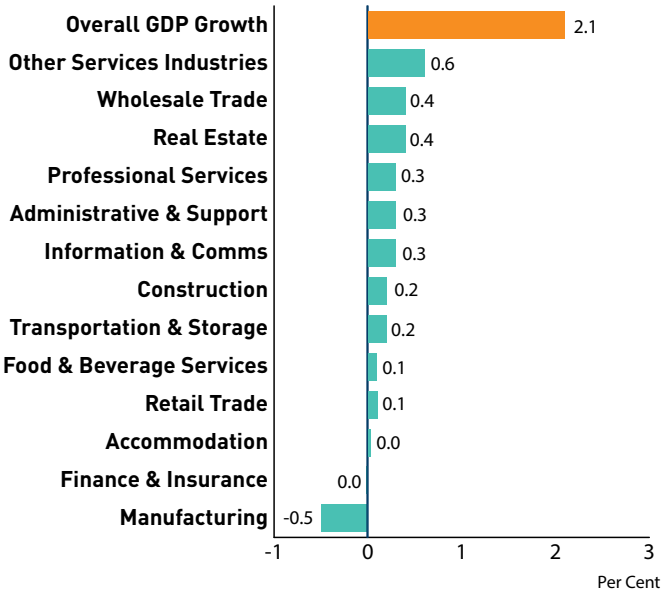


Exhibit 1.3: Percentage-Point Contribution to Growth in Real GDP in 4Q 2022 (By Sectors)

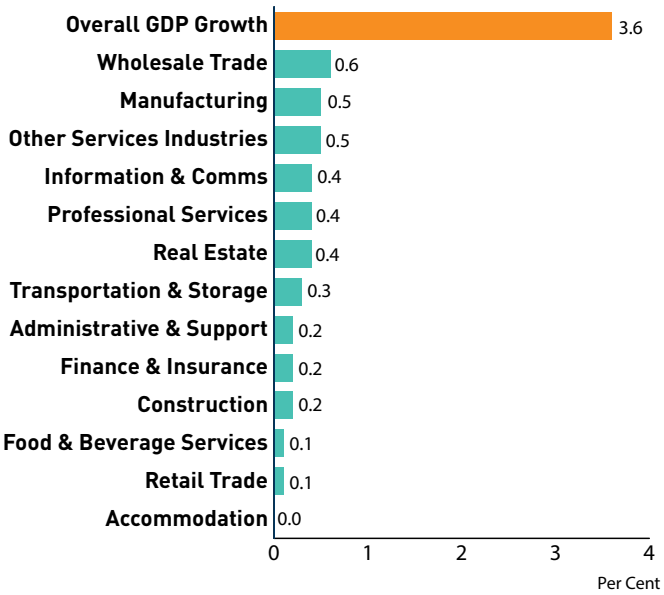


Contribution to Growth

In the fourth quarter, all sectors contributed positively to GDP growth, except for the manufacturing and finance & insurance sectors (Exhibit 1.3). Among the sectors that expanded, the other services, wholesale trade and real estate sectors were the top contributors to GDP growth during the quarter.

For the whole of 2022, all sectors contributed positively to GDP growth, with the wholesale trade, manufacturing and other services sectors contributing the most to GDP growth for the year (Exhibit 1.4).

Exhibit 1.4: Percentage-Point Contribution to Growth in Real GDP in 2022 (By Sectors)



SOURCES OF GROWTH

Total demand fell by 4.1 per cent year-on-year in the fourth quarter, a reversal from the increase of 3.1 per cent in the previous quarter (Exhibit 1.5). This was due to a fall in external demand during the quarter, which was partially offset by a rise in domestic demand.

For 2022 as a whole, total demand edged up by 0.1 per cent, weakening from the 11.1 per cent increase in 2021. Growth in total demand was supported by a rise in domestic demand (1.1 percentage-points) even as external demand declined (-1.0 percentage-points).

Exhibit 1.5: Percentage-Point Contribution to Total Demand Growth

	2021	2022				2022
		I	II	III	IV	
Total Demand	11.1	-0.8	2.4	3.1	-4.1	**0.1**
External Demand	8.6	-1.3	0.5	2.4	-5.2	**-1.0**
Total Domestic Demand	2.5	0.6	1.9	0.7	1.2	**1.1**
Consumption Expenditure	1.0	0.2	1.6	1.3	1.1	**1.0**
Public	0.2	-0.2	0.0	-0.2	0.0	**-0.1**
Private	0.9	0.5	1.6	1.4	1.1	**1.2**
Gross Fixed Capital Formation	1.5	0.2	0.2	0.3	-0.1	**0.1**
Changes in Inventories	0.0	0.2	0.1	-0.9	0.2	**-0.1**

External Demand

External demand shrank by 7.0 per cent year-on-year in the fourth quarter, a sharp pullback from the 3.2 per cent growth in the previous quarter (Exhibit 1.6). The slump in external demand could be attributed to a contraction in the real exports of both goods and services.

For the full year, external demand contracted by 1.3 per cent, a reversal from the 11.7 per cent expansion in 2021. The drop in external demand could be attributed to a fall in real services exports, which was in turn due to a contraction in the real exports of transport services. By contrast, real merchandise exports rose, led by the real exports of machinery and transport equipment.

Domestic Demand

Total domestic demand rose by 4.6 per cent year-on-year in the fourth quarter, an improvement from the 2.8 per cent growth in the previous quarter. The pickup in domestic demand during the quarter was supported by an increase in consumption expenditure, which more than offset a fall in gross fixed capital formation.

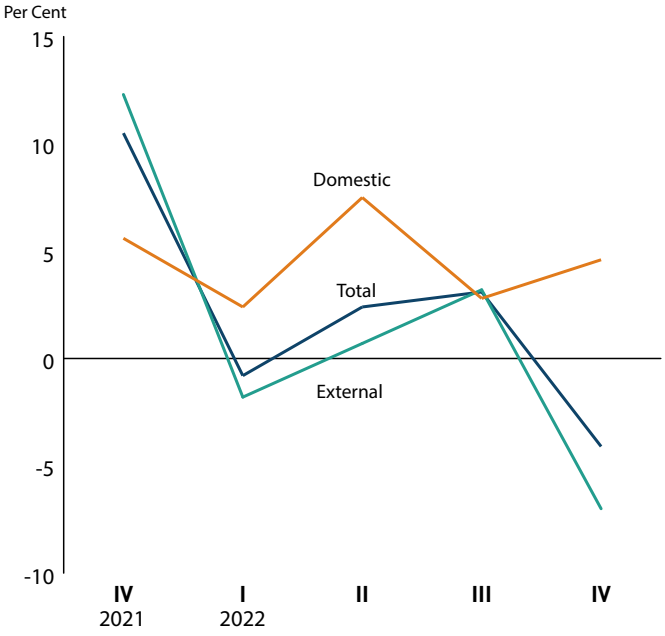
For 2022 as a whole, total domestic demand expanded by 4.3 per cent, moderating from the 9.4 per cent growth in 2021. The increase in domestic demand was supported by growth in both consumption expenditure and gross fixed capital formation, even as inventories declined.

Consumption Expenditure

Total consumption expenditure rose by 6.7 per cent year-on-year in the fourth quarter, extending the 7.9 per cent increase in the previous quarter.

For the full year, total consumption expenditure picked up by 6.5 per cent, faster than the 5.8 per cent growth in 2021. The increase in consumption expenditure was driven by an expansion in private consumption which outweighed a decline in public consumption. Specifically, private consumption rose by 9.7 per cent, attributable in part to an increase in expenditure on miscellaneous goods & services and recreation & culture. At the same time, public consumption fell by 2.3 per cent, a reversal from the 3.7 per cent expansion in 2021.

Exhibit 1.6: Changes in Total Demand in Chained (2015) Dollars



Gross Fixed Capital Formation

Gross fixed capital formation (GFCF) fell by 1.2 per cent year-on-year in the fourth quarter, a reversal from 3.4 per cent expansion in the preceding quarter. The decline in GFCF during the quarter was on account of a fall in private GFCF (-1.8 per cent), which outstripped an increase in public GFCF (2.0 per cent).

For the full year, GFCF rose by 1.6 per cent, a sharp moderation from the 18.0 per cent increase in 2021 (Exhibit 1.7). Public GFCF decreased by 1.8 per cent, a reversal from the 21.5 per cent growth in 2021, weighed down mainly by lower investment spending on machinery & equipment (Exhibit 1.8). Meanwhile, private GFCF rose by 2.3 per cent, slower than the 17.3 per cent expansion in 2021. The increase in private GFCF was due to higher investment spending across all components except for private construction & works.

Exhibit 1.7: Annual Changes in Gross Fixed Capital Formation in Chained (2015) Dollars, 2022

	Total	Public	Private
Total	1.6	-1.8	2.3
Construction & Works	-0.5	0.4	-1.0
Transport Equipment	1.0	-21.0	2.4
Machinery & Equipment	5.9	-21.7	7.9
Intellectual Property Products	1.2	2.8	1.1

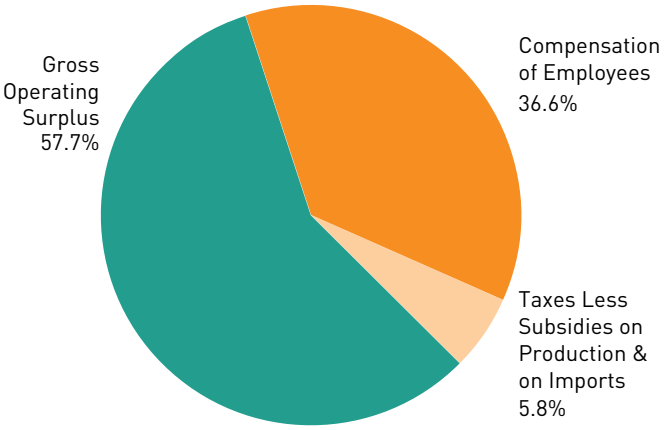
Exhibit 1.8: Percentage-Point Contribution to Growth of Gross Fixed Capital Formation in Chained (2015) Dollars, 2022

	Total	Public	Private
Total	1.6	-0.3	1.9
Construction & Works	-0.2	0.1	-0.3
Transport Equipment	0.1	-0.1	0.2
Machinery & Equipment	1.3	-0.3	1.7
Intellectual Property Products	0.4	0.1	0.3

INCOME COMPONENTS OF NOMINAL GDP

Singapore's nominal GDP amounted to $644 billion in 2022, a 13.0 per cent increase over 2021. Gross operating surplus accounted for 57.7 per cent of nominal GDP, while compensation of employees accounted for 36.6 per cent (Exhibit 1.9). Taxes (less subsidies) on production and imports made up the remaining 5.8 per cent of nominal GDP.

Exhibit 1.9: Income Components of GDP at Current Prices



NATIONAL SAVING

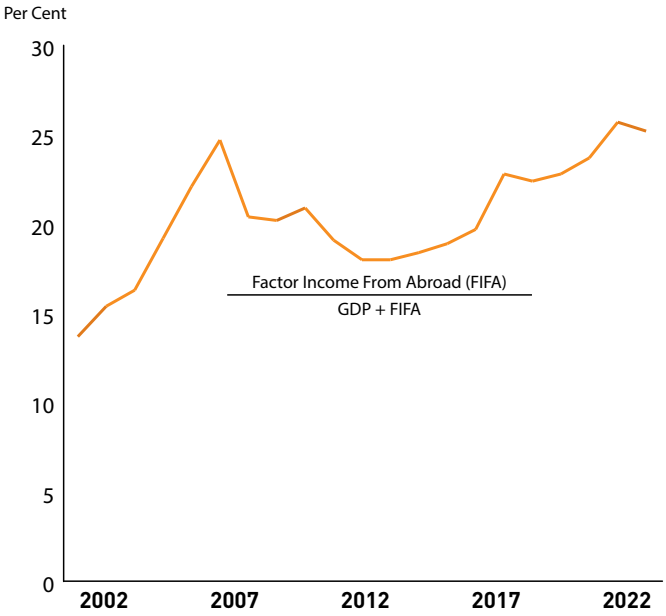
With factor income outflows exceeding inflows by $104 billion, Gross National Income (GNI) came in at $540 billion in 2022, lower than the $644 billion in nominal GDP. Gross National Savings (GNS) increased by 13.5 per cent to $265 billion in 2022. This comprised a net outflow of $124 billion that was lent or transferred abroad, and $141 billion in Gross Capital Formation. The national savings rate was 49.2 per cent of GNI in 2022, similar to the 49.1 per cent observed in 2021.

GNI AND THE EXTERNAL ECONOMY

Factor income from abroad reached $217 billion in 2022, up from the $196 billion in 2021. The contribution of overseas operations to the total economy was 25.2 per cent in 2022, slightly lower than the contribution of 25.7 per cent recorded in 2021 (Exhibit 1.10).

Based on the Department of Statistics' Survey of Singapore's Investment Abroad, the stock of direct investment abroad increased from $1,148 billion in 2020 to about $1,238 billion in 2021.

Exhibit 1.10: Singapore's Earnings from External Economy as a Proportion of Total Income



CHAPTER

2

LABOUR MARKET AND PRODUCTIVITY

Chapter 2

LABOUR MARKET AND PRODUCTIVITY

EMPLOYMENT AND PRODUCTIVITY GROWTH IN 2022

Employment (as at year end)

+254,000

VA per Actual Hour Worked

-0.8%

MAIN DRIVERS OF EMPLOYMENT GROWTH IN 2022

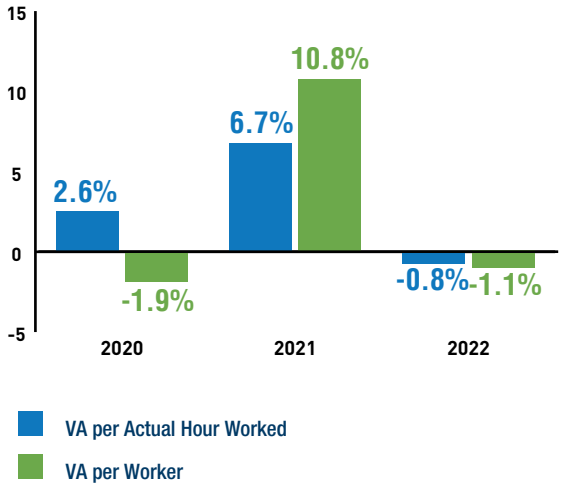
+91,400 employed

Construction

+44,900 employed

Other Services Industries

VA PER ACTUAL HOUR WORKED AND VA PER WORKER GROWTH



SECTORS WITH THE HIGHEST VA PER ACTUAL HOUR WORKED GROWTH IN 2022

+15.5%

Real Estate

+12.8%

Food & Beverage Services

+7.4%

Retail Trade

UNEMPLOYMENT RATES IN 2022

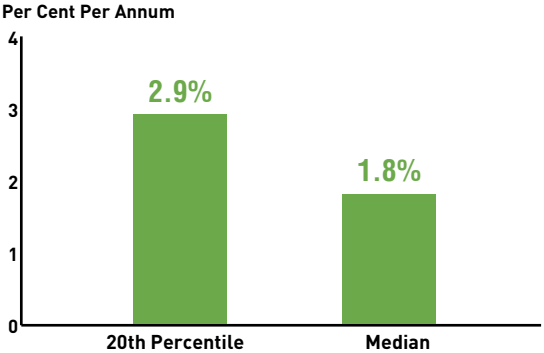
Overall Unemployment Rate

2.1%

Resident Unemployment Rate

2.9%

ANNUALISED CHANGE IN REAL GROSS MONTHLY INCOME FROM WORK



Real median gross monthly income of full-time employed residents rose by **+1.8% per annum** from June 2017 to June 2022

OVERVIEW[1]

Total employment surged by 254,000 in 2022, driven by gains in both resident and non-resident employment. The increase in employment was experienced across all broad sectors. Excluding Migrant Domestic Workers (MDWs), total employment grew by 231,700.

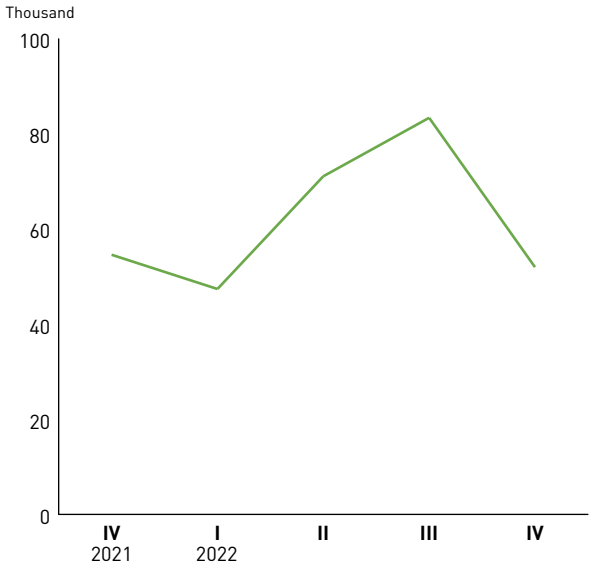
At the same time, unemployment rates and the number of retrenchments declined in 2022.

Between 2017 and 2022, the real gross monthly income of full-time employed residents at the median and 20th percentile increased by 1.8 per cent per annum and 2.9 per cent per annum respectively.

EMPLOYMENT

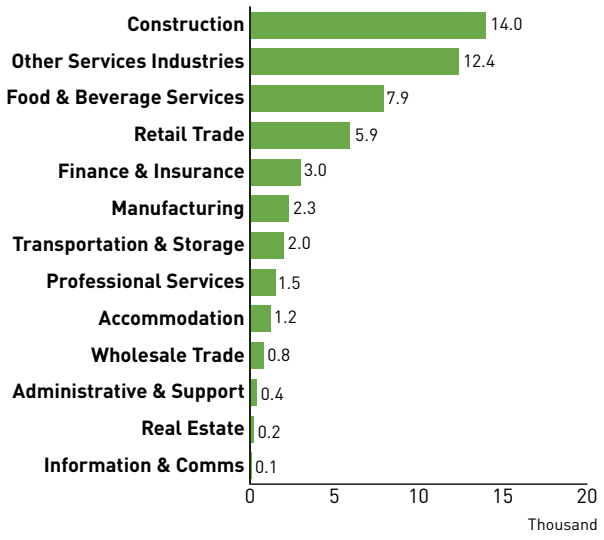
Total employment increased by 52,000 in the fourth quarter, a more moderate pace of increase as compared to the second (+71,100) and third (+83,400) quarters (Exhibit 2.1). A similar trend was observed for total employment excluding MDWs.

Exhibit 2.1: Changes in Total Employment



By broad sectors, employment rose in the services (+35,500), construction (+14,000) and manufacturing (+2,300) sectors in the fourth quarter. Within the services sector, employment gains were the largest in the other services and food & beverage services sectors (Exhibit 2.2).

Exhibit 2.2: Changes in Employment by Industry in 4Q 2022



1 *Figures for the fourth quarter of 2022 and full year of 2022 are based on preliminary estimates.*

For the whole of 2022, total employment increased by 254,000, picking up from the increase of 40,200 recorded in 2021. Total employment expanded across the broad sectors, with the services sector (+128,000) registering the largest gains, followed by the construction (+91,400) and manufacturing (+34,000) sectors.

The expansion in total employment in 2022 occurred on the back of gains in both resident and non-resident employment.[2] Non-resident employment accounted for most of the employment gains during the year, due to employers backfilling positions as border restrictions were lifted in April 2022. Meanwhile, resident employment continued to grow, particularly in the finance & insurance, information & communications and other services sectors.

UNEMPLOYMENT

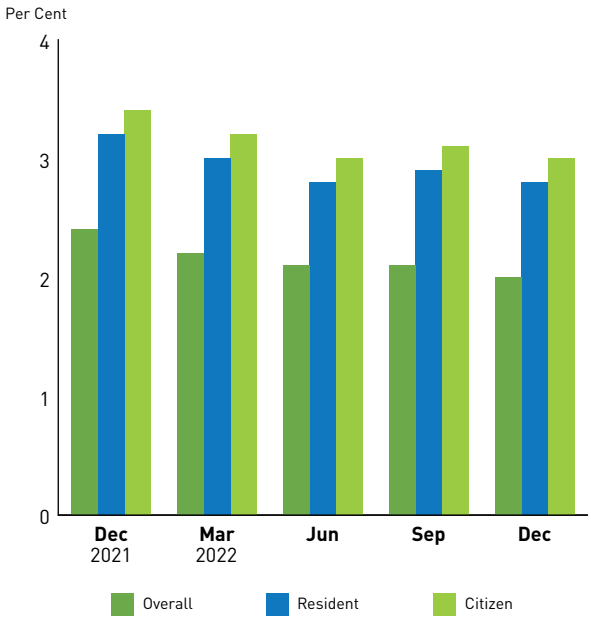
Between September and December 2022, the seasonally-adjusted unemployment rate eased at the overall level (from 2.1 per cent to 2.0 per cent), and for residents (from 2.9 per cent to 2.8 per cent) and citizens (from 3.1 per cent to 3.0 per cent) (Exhibit 2.3).

In December 2022, there were 67,400 unemployed residents, of whom 59,800 were Singapore citizens. These were lower than the number of unemployed residents (70,800) and citizens (62,400) in September 2022.

For the full year of 2022, the annual average unemployment rate declined at the overall level (from 2.7 per cent in 2021 to 2.1 per cent), as well as for residents (from 3.5 per cent to 2.9 per cent) and citizens (from 3.7 per cent to 3.0 per cent).

In 2022, 69,600 residents, of whom 62,000 were Singapore citizens, were unemployed on average. These were lower than their respective figures in 2021 (84,300 and 75,700).

Exhibit 2.3: Unemployment Rates (Seasonally-Adjusted)



RETRENCHMENTS

The number of retrenchments increased in the fourth quarter (3,000), compared to the third quarter (1,300). Notwithstanding the rise, the number of retrenchments in the fourth quarter remained within the range of quarterly retrenchments observed in 2019.[3] Over the quarter, retrenchments rose in the services (from 1,050 to 2,000), manufacturing (from 250 to 900) and construction (from 10 to 100) sectors.

Despite the increase in retrenchments in the last quarter of 2022, the total number of retrenchments for 2022 as a whole (6,450) was lower than the level recorded in 2021 (8,020). The trends were mixed across the broad sectors. Specifically, retrenchments fell in the services (from 6,020 to 4,360) and construction (from 240 to 180) sectors, but rose in the manufacturing sector (from 1,710 to 1,910).

2 *Figures for resident and non-resident employment changes for the full year of 2022 will be released in MOM's Labour Market Report 2022 in mid-March 2023.*
3 *In 2019, quarterly retrenchments ranged from 2,320 to 3,230.*

PRODUCTIVITY

Real Value-Added per Actual Hour Worked

Overall labour productivity, as measured by real value-added per actual hour worked, fell by 4.6 per cent in the fourth quarter, extending the 1.8 per cent decline in the previous quarter.

By sectors, the productivity of the real estate, administrative & support services, food & beverage services, wholesale trade, retail trade and professional services sectors rose in the fourth quarter. On the other hand, the productivity of the accommodation, construction, manufacturing, finance & insurance, information & communications, transportation & storage and other services sectors declined.

Collectively, the productivity of outward-oriented sectors fell by 4.3 per cent in the fourth quarter, while that of domestically-oriented sectors rose by 0.5 per cent over the same period.[4]

Exhibit 2.4: Changes in Value-Added per Actual Hour Worked for the Overall Economy

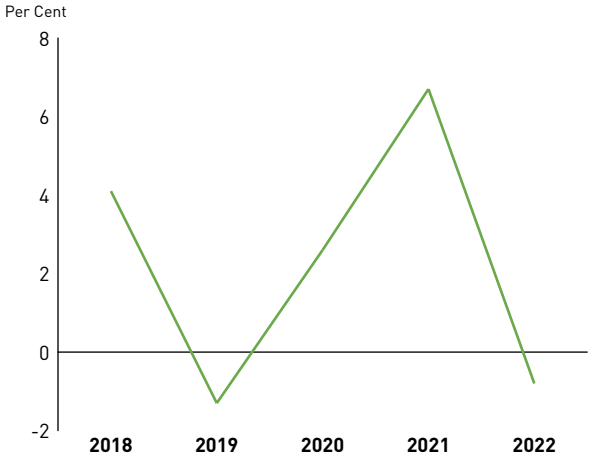
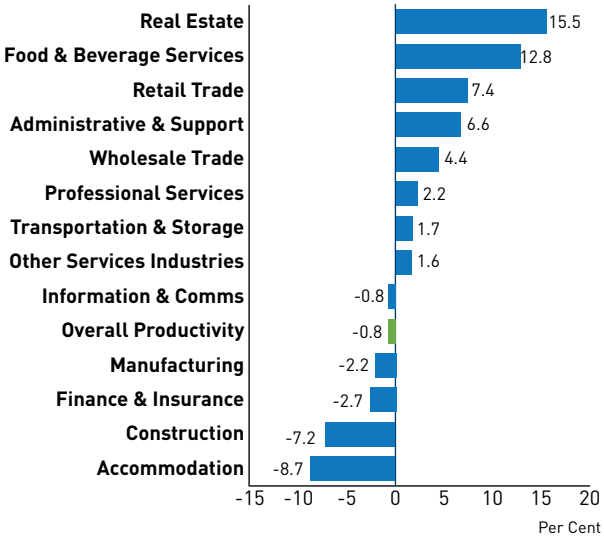


Exhibit 2.5: Changes in Value-Added per Actual Hour Worked by Industry in 2022



For the full year of 2022, real value-added per actual hour worked declined by 0.8 per cent, a reversal from the 6.7 per cent increase in 2021 (Exhibit 2.4). While growth in the real value-added per actual hour worked for the overall economy in 2022 was supported by double-digit productivity gains in the real estate and food & beverage services sectors, it was weighed down by productivity declines in the accommodation, construction, finance & insurance, manufacturing and information & communications sectors (Exhibit 2.5).

Real Value-Added per Worker

Real value-added per worker fell by 4.9 per cent in the fourth quarter, extending the 2.3 per cent contraction in the preceding quarter.

For 2022 as a whole, real value-added per worker declined by 1.1 per cent, in contrast to the 10.8 per cent growth in 2021.

The weaker performance of real value-added per worker compared to real value-added per actual hour worked in 2022 was because of a slight decline in the average number of actual hours worked per worker during the year.

4 *Outward-oriented sectors refer to manufacturing, wholesale trade, transportation & storage, accommodation, information & communications, finance & insurance and professional services. Domestically-oriented sectors refer to construction, retail trade, food & beverage services, real estate, administrative & support services and other services industries.*

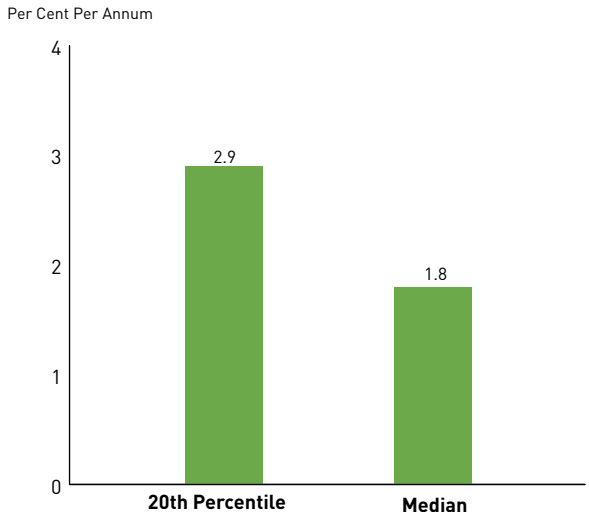
INCOME FROM WORK

Reflecting the recovery of the labour market in 2022, both nominal and real gross monthly income of resident workers increased. Specifically, nominal median gross monthly income (including employer CPF contributions) of full-time employed residents grew by 8.3 per cent to reach $5,070 in 2022, extending the growth of 3.2 per cent in 2021.

After adjusting for inflation[5], real median income increased by 2.0 per cent in 2022. Lower-income earners also saw growth in their incomes after taking inflation into account, with real income at the 20th percentile rising by 4.7 per cent in 2022.

Over the last five years (i.e., June 2017 to June 2022), real median income rose by 9.4 per cent cumulatively, or 1.8 per cent per annum (Exhibit 2.6). During this period, real income growth at the 20th percentile exhibited stronger growth (15.4 per cent cumulatively, or 2.9 pe r cent per annum), thus narrowing the income gap with the median income earner.

Exhibit 2.6: Annualised Change in Real Gross Monthly Income from Work of Full-Time Employed Residents, 2017-2022



5 *The Consumer Price Index (CPI) for all items rose by 6.1 per cent in 2022.*

CHAPTER

3

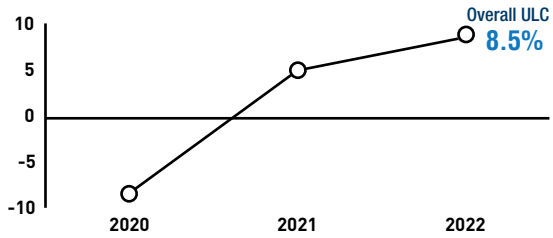
COSTS, INVESTMENTS AND PRICES

Chapter 3

COSTS, INVESTMENTS AND PRICES

OVERALL UNIT LABOUR COST

(Year-On-Year Growth)



WITHIN THE MANUFACTURING SECTOR

9.6%
in 2022
Unit Labour Cost

9.6%
in 2022
Unit Business Cost

INVESTMENT COMMITMENTS IN 2022

Fixed Asset Investment Commitments

$22.5 billion

Total Business Expenditure Commitments

$6.2 billion

CLUSTERS THAT ATTRACTED THE HIGHEST FIXED ASSET INVESTMENT COMMITMENTS

Electronics

Services Clusters

Chemicals

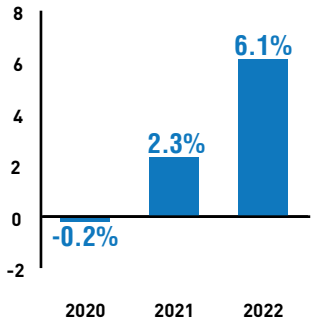
CLUSTERS THAT ATTRACTED THE HIGHEST TOTAL BUSINESS EXPENDITURE COMMITMENTS

Headquarters & Professional Services

Infocommunications & Media

Research & Development

CPI-ALL ITEMS INFLATION



IN 2022, THE INCREASE IN CPI WAS MAINLY DUE TO THE INCREASE IN PRICES OF

Transport

3.0%
point contribution

Housing & Utilities

1.3%
point contribution

Food

1.1%
point contribution

OVERVIEW

Overall ULC for the economy rose by 9.3 per cent year-on-year in the fourth quarter, extending the increase of 7.7 per cent in the preceding quarter. For the whole of 2022, overall ULC rose by 8.5 per cent.

Total investment commitments attracted by EDB remained healthy in 2022. The manufacturing sector garnered a larger amount of commitments in terms of fixed asset investments (FAI), while the services sector attracted a larger amount of total business expenditure (TBE) commitments. By clusters, the electronics and chemicals clusters within the manufacturing sector were the biggest contributors to FAI commitments, while the headquarters & professional services cluster within the services sector contributed the most to TBE commitments.

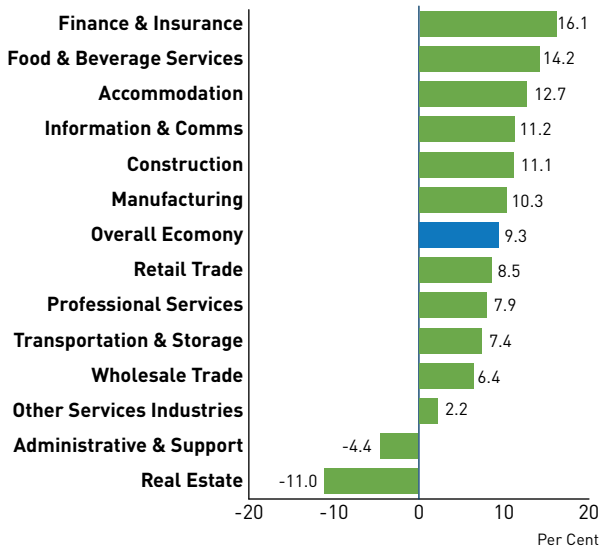
The Consumer Price Index-All Items (CPI-All Items) rose by 6.6 per cent year-on-year in the fourth quarter, moderating from the 7.3 per cent increase in the previous quarter. For 2022 as a whole, CPI-All Items inflation came in at 6.1 per cent, higher than the 2.3 per cent recorded in 2021.

Producer prices, as measured by the domestic supply price index (DSPI), the Singapore manufactured products price index (SMPPI) as well as the import and export price indices, all rose on a year-on-year basis in the fourth quarter. For the whole of 2022, the DSPI, SMPPI as well as the import and export price indices increased by 18.6 per cent, 14.9 per cent, 14.4 per cent and 15.9 per cent respectively.

COSTS

Overall ULC for the economy rose by 9.3 per cent year-on-year in the fourth quarter, extending the increase of 7.7 per cent in the previous quarter (Exhibit 3.1). The pickup in overall ULC during the quarter came on the back of an increase in total labour cost per worker and a decrease in labour productivity (as measured by real value-added per worker).

Exhibit 3.1: Changes in Unit Labour Cost in 4Q 2022



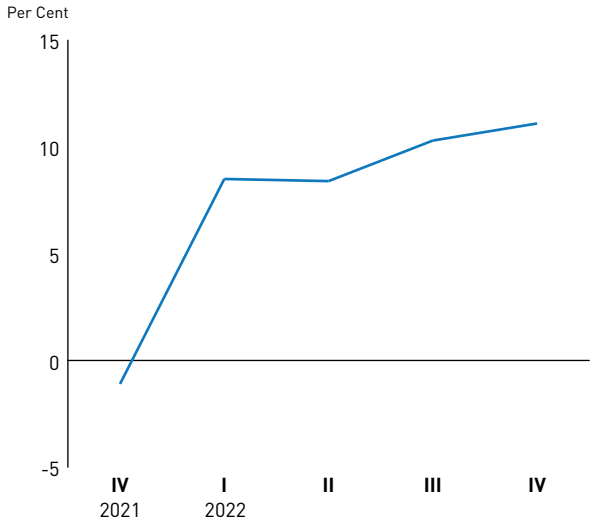
By broad sectors, the construction sector registered the largest ULC increase (11.1 per cent) in the fourth quarter, although this was a moderation from the 14.0 per cent increase seen in the previous quarter. Similarly, the ULC for the manufacturing sector rose by 10.3 per cent in the fourth quarter, following the 10.0 per cent increase in the third quarter. For both the manufacturing and construction sectors, the increase in their respective ULCs was due to a fall in their productivity, which was partially offset by a decline in total labour cost per worker in the sector.

Meanwhile, the ULC of services producing industries went up by 7.8 per cent in the fourth quarter, extending the 6.0 per cent increase in the previous quarter. Most services sectors saw a pickup in their ULCs, with the finance & insurance sector registering the largest increase (16.1 per cent). The latter was on account of an increase in total labour cost per worker and a decline in labour productivity within the sector.

For the whole of 2022, the overall ULC rose at a faster pace of 8.5 per cent, compared to the 4.9 per cent increase in 2021. The rise in the overall ULC was due to the combined effect of an increase in total labour cost per worker and a decline in labour productivity in the economy.

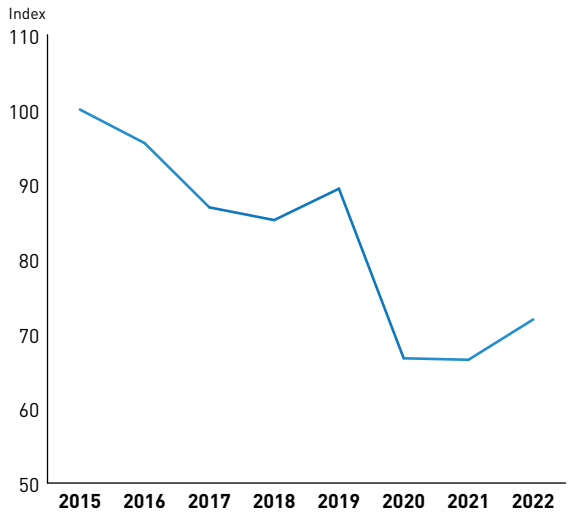
Manufacturing unit business cost (UBC) rose by 11.1 per cent year-on-year in the fourth quarter, extending the 10.3 per cent increase in the previous quarter (Exhibit 3.2). The increase in manufacturing UBC came on the back of a pickup in unit services costs (11.6 per cent), manufacturing ULC (10.3 per cent) and unit non-labour production taxes (11.5 per cent). For 2022 as a whole, the manufacturing UBC climbed by 9.6 per cent, faster than the 0.1 per cent increase in 2021.

Exhibit 3.2: Changes in Unit Business Cost for Manufacturing



Singapore's relative unit labour cost (RULC) for manufacturing – a measure of Singapore's competitiveness against 16 economies[1] – rose in 2022 (i.e., less competitive) as compared to 2021 (Exhibit 3.3). The deterioration in Singapore's RULC was mainly on account of an increase in Singapore's manufacturing ULC and a stronger Singapore dollar.

Exhibit 3.3: Singapore's Relative Unit Labour Cost in Manufacturing Against Selected 16 Economies[1]

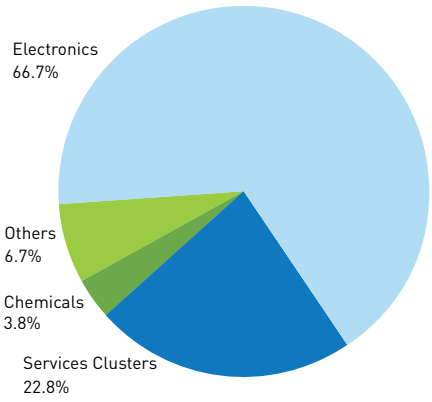


INVESTMENT COMMITMENTS

EDB attracted healthy levels of investment commitments in 2022. For the full year, FAI and TBE commitments came in at $22.5 billion and $6.2 billion respectively.

In terms of FAI, the largest contribution came from the manufacturing sector, which garnered $17.4 billion in commitments. Within manufacturing, the electronics cluster attracted the largest amount of FAI commitments, at $15.0 billion, followed by the chemicals cluster, at $862 million. Within the services sector, the infocommunications & media and research & development clusters contributed the most to total FAI commitments, with $2.2 billion and $1.4 billion respectively (Exhibit 3.4).

Exhibit 3.4: Fixed Asset Investments by Industry Clusters in 2022

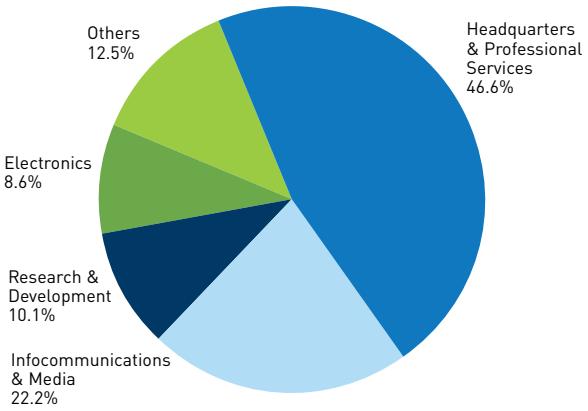


Investors from the United States were the largest source of FAI commitments, with $11.4 billion (50.6 per cent). They were followed by investors from Europe who contributed about $4.8 billion of FAI commitments (21.2 per cent).

For TBE, the services sector attracted the highest amount of commitments, at $5.0 billion. This was driven by the headquarters & professional services cluster, which garnered $2.9 billion in TBE commitments, followed by the infocommunications & media cluster, with $1.4 billion. Among the manufacturing clusters, the electronics cluster contributed the highest amount of TBE commitments, at $533 million (Exhibit 3.5).

1 *The 16 economies are Australia, China, France, Germany, Hong Kong, India, Indonesia, Japan, Malaysia, Netherlands, South Korea, Taiwan, Thailand, the United Kingdom, the United States and Vietnam.*

Exhibit 3.5: Total Business Expenditure by Industry Clusters in 2022



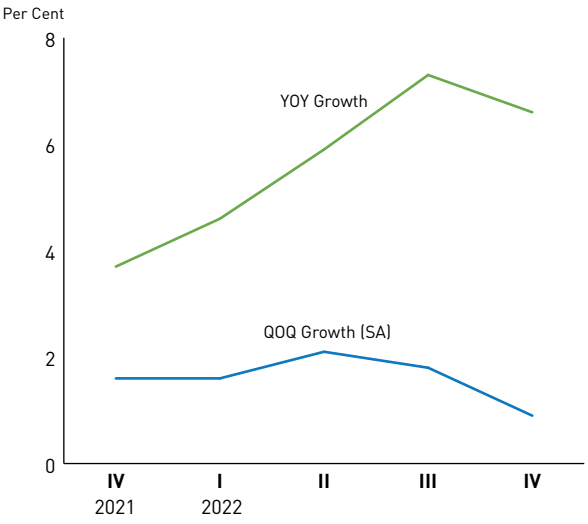
Investors from the others region[2] accounted for most of the TBE commitments, at $2.7 billion (44.1 per cent).

When these projects are fully implemented, they are expected to generate $20.6 billion of value-added per annum and create more than 17,000 jobs in the coming years.

CONSUMER PRICE INDEX

Singapore's CPI-All Items rose by 6.6 per cent on a year-on-year basis in the fourth quarter, moderating from the 7.3 per cent increase in the previous quarter (Exhibit 3.6). On a quarter-on-quarter seasonally-adjusted basis, CPI-All Items inflation came in at 0.9 per cent, down from the 1.8 per cent in the previous quarter.

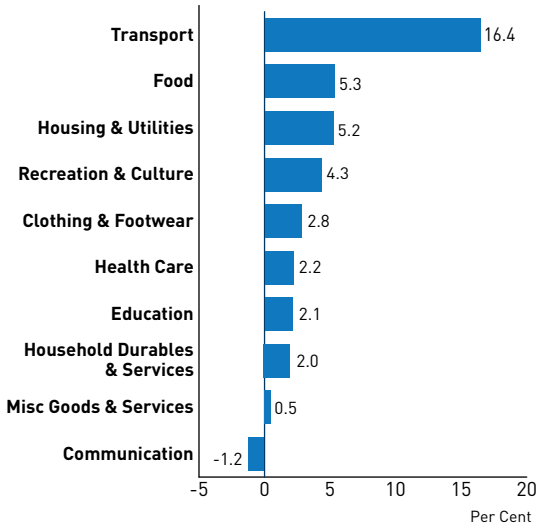
Exhibit 3.6: Changes in Overall CPI



For 2022 as a whole, CPI-All Items rose by 6.1 per cent, faster than the 2.3 per cent increase in 2021.

Price increases in the following CPI categories contributed positively to CPI-All Items inflation in 2022 (Exhibit 3.7). Transport costs climbed by 16.4 per cent due to an increase in the costs of cars, petrol and airfares.[3] Food prices rose by 5.3 per cent on the back of an increase in the costs of food services like hawker food and restaurant meals, as well as non-cooked food items such as meat, fish & seafood, and bread & cereals. Housing & utilities costs increased by 5.2 per cent because of a rise in accommodation and electricity costs. Recreation & culture prices rose by 4.3 per cent as a result of the higher costs of holiday travel[4] and recreational & cultural services. Clothing & footwear prices picked up by 2.8 per cent due to more expensive ready-made garments and footwear. Healthcare costs increased by 2.2 per cent on account of the higher costs of outpatient and hospital services. Education costs rose by 2.1 per cent due to higher fees at commercial institutions and universities. Prices of household durables & services went up by 2.0 per cent as the prices of household durables and domestic & household services increased. Prices of miscellaneous goods & services edged up by 0.5 per cent on the back of a rise in the cost of personal care items.

Exhibit 3.7: Changes in CPI by Category in 2022



By contrast, communication costs fell by 1.2 per cent on account of a drop in the prices of telecommunication services.

2 *Others refers to countries except for Singapore, Europe, Japan and the United States.*
3 *As overseas travel was limited in April 2020 – December 2022, a portion of the CPI for airfares was imputed using the overall change in CPI-All Items. With more flights resuming and prices becoming available, actual airfares are being progressively incorporated into the CPI.*
4 *Similarly, as overseas travel was limited, the CPI for holiday expenses was imputed using the overall change in CPI-All Items. However, with the easing of travel restrictions, actual holiday expenses are increasingly being incorporated into the CPI.*

PRODUCER PRICE INFLATION

Producer prices – as measured by the DSPI, SMPPI, and import and export price indices – all rose on a year-on-year basis in the fourth quarter (Exhibits 3.8 and 3.9). The increases seen during the quarter came on the back of a rise in the prices of integrated circuits and diesel fuel.

For the full year, the DSPI and SMPPI climbed by 18.6 per cent and 14.9 per cent respectively, while the import and export price indices rose by 14.4 per cent and 15.9 per cent respectively. The higher prices of integrated circuits and diesel fuel also contributed to the increase in these producer price indices for the year.

Exhibit 3.8: Changes in Domestic Supply Price and Singapore Manufactured Products Price Indices

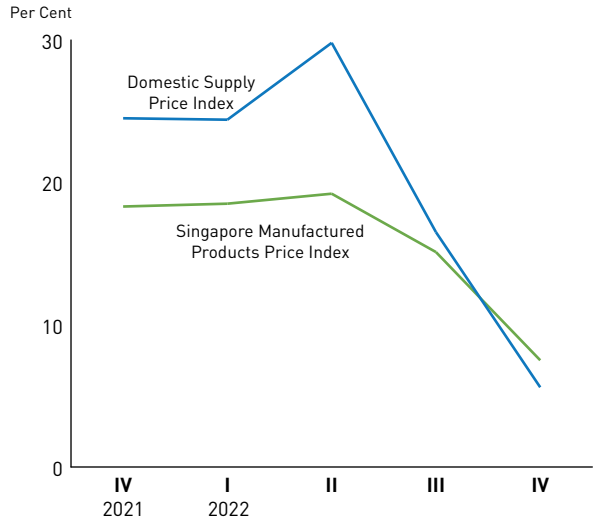
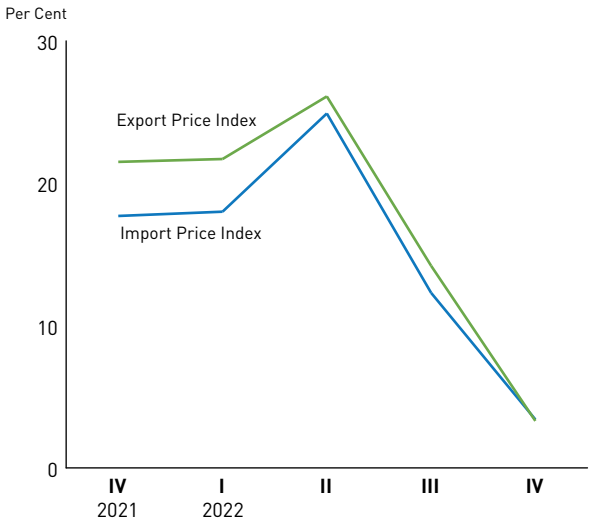


Exhibit 3.9: Changes in Import and Export Price Indices



Box Article 3.1

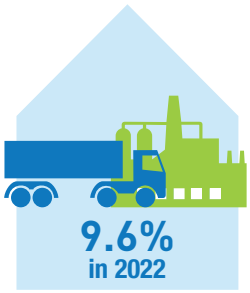
BUSINESS COST CONDITIONS IN SINGAPORE'S MANUFACTURING AND SERVICES SECTORS

OVERVIEW

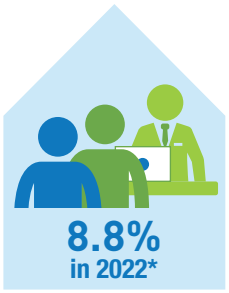
Unit business cost in both the manufacturing and overall services sector rose in 2022.

DEFINITION OF UBC

$$\text{UBC} = \frac{\text{Total Business Cost}}{\text{Gross Real Value-Added}}$$



UBC for Manufacturing



UBC for Services

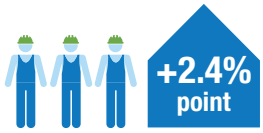
*Refers to first three quarters of 2022

KEY DRIVERS

The increase in manufacturing UBC in 2022 was mainly on account of increases in manufacturing unit labour cost as well as the higher costs of work given out and utilities.

The increase in services UBC in 2022 came on the back of an increase in non-labour cost and unit labour cost.

CONTRIBUTION TO MANUFACTURING UBC IN 2022

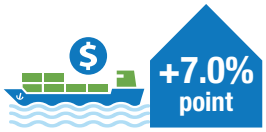


Labour Cost

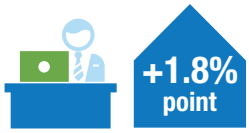
Work Given Out

Utilities

CONTRIBUTION TO SERVICES UBC IN 2022



Non-Labour Cost



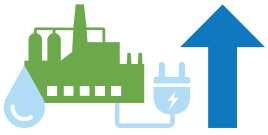
Labour Cost

OUTLOOK

Looking ahead, the overall ULC for the economy is likely to continue to rise in 2023, albeit at a more moderate pace as the growth in renumeration per worker is likely to soften amidst global economic headwinds and the slowdown in the domestic economy. At the same time, the costs of utilities, fuel and transportation are expected to ease but remain elevated, reflecting the outlook for global oil prices in 2023.

UNIT LABOUR COST

UTILITIES COST



BOX 3.1: BUSINESS COST CONDITIONS IN SINGAPORE'S MANUFACTURING AND SERVICES SECTORS

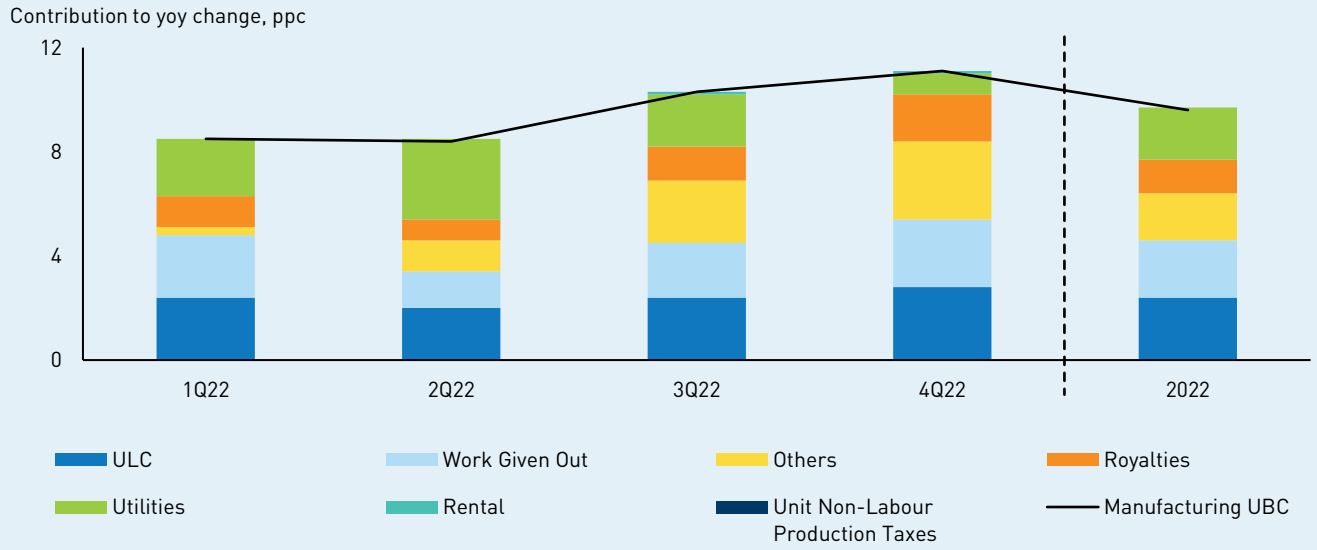
This box article highlights the latest trends in business costs for firms in Singapore's manufacturing and services sectors, as well as the outlook for key components of business costs in 2023.

(I) Unit Business Cost[1] in the Manufacturing and Services Sectors

Unit business cost in both the manufacturing and overall services sector rose in 2022

In 2022, the unit business cost index for the manufacturing sector (UBCI) rose by 9.6 per cent (Exhibit 1). The main contributors to the increase in UBCI were manufacturing unit labour cost (ULC), as well as the costs of work given out and utilities, with their contributions collectively accounting for 6.6 percentage-points (pp) of the increase in the UBCI. Meanwhile, other cost components such as non-labour production taxes[2] (e.g., property, road and other indirect taxes) and rental costs[3] had a relatively small impact on the UBCI, in part due to their small shares in overall business cost. (Please refer to the Annex for the business cost structure of firms in the manufacturing and services sectors.)

Exhibit 1: Contribution to the UBCI Change in 2022, by Key Cost Components



Source: Department of Statistics
Note: "Others" consists of sub-components such as the charges paid for transportation and freight, professional fees, advertising, commission and agency fees, sundry expenses, etc.

As for the overall services sector, its unit business cost index (UBC-Services Index)[4] rose by 8.8 per cent in the first three quarters of 2022 compared to the same period a year ago (Exhibit 2).[5] This was due to an increase in non-labour costs (+7.0pp contribution) and the services ULC (+1.8pp). In turn, the increase in non-labour costs could be attributed to higher freight & transport charges and fuel costs caused by a sharp rise in oil prices following the onset of the Russia-Ukraine war. Meanwhile, other cost components such as rental costs had a relatively small impact on the UBC-Services Index. In particular, while the rental for office space rose in 2022, there was a fall in rental for retail space over the same period.[6]

1 *Unit business cost measures the costs incurred to produce one unit of output. Only operating expenses (excluding materials costs and depreciation) are included in business costs. This is the definition adopted by the Department of Statistics (DOS) in its computation of the Unit Business Cost for Manufacturing. See DOS's Information Paper, "Methodological Review on the Unit Business Cost Index for Manufacturing Industry (Base Year 2010=100)", at https://www.singstat.gov.sg/-/media/files/publications/economy/ip-e38.pdf.*

2 *Labour-related taxes on production (e.g., foreign worker levy) are classified under labour cost. Taxes on income (e.g., corporate income tax) are not included in business cost.*

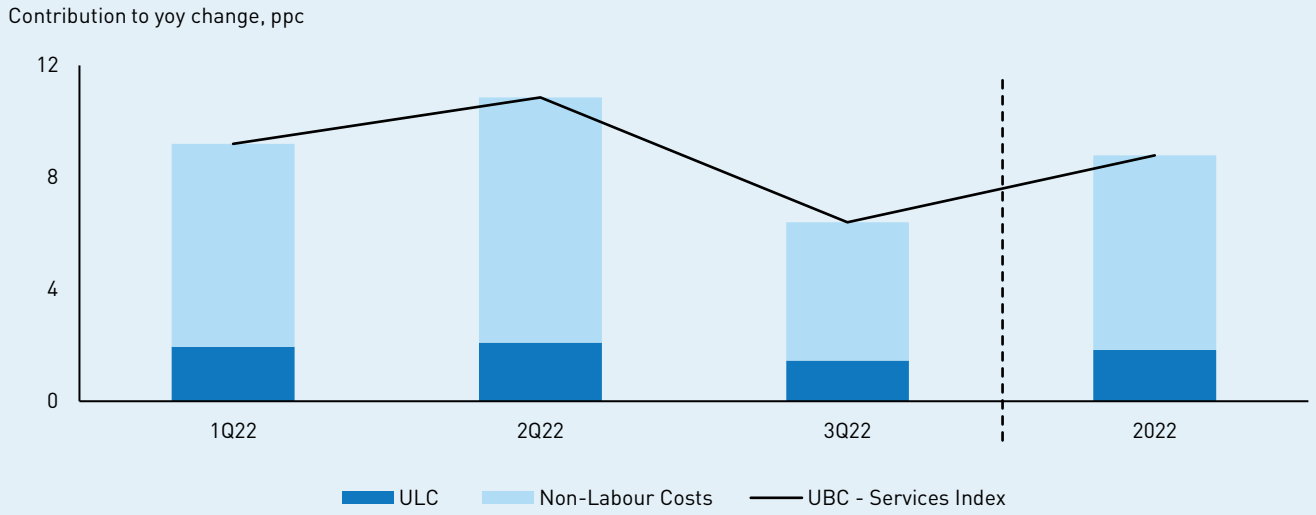
3 *Industrial rentals rose by 6.9 per cent in 2022 amidst inflationary pressures, larger than the 2.0 per cent increase in 2021.*

4 *The UBC-Services Index is estimated by MAS to assess cost conditions in the services sector. It is a composite index of proxy cost indicators for each component of business costs where available, combined using weights estimated from expenditure data in DOS's Services Survey Series 2019: The Services Sector, as well as the 2019 Input-Output tables.*

5 *Latest available UBC-Services Index is up to the third quarter of 2022.*

6 *Rentals of office space rose by 11.7 per cent in 2022, supported by an increase in the demand for office space as the economy continued to recover and workplace safe management measures were lifted. Meanwhile, rentals of retail space fell by 2.4 per cent in 2022, moderating from the 6.8 per cent decline in 2021 as the relaxation of domestic and travel restrictions led to an increase in retail spending and demand for retail space.*

Exhibit 2: Contribution to UBC-Services Index Changes by Cost Components



Source: Monetary Authority of Singapore
Notes: (1) The UBC-Services Index for 2022 refers to the average of the index for the first three quarters; (2) Detailed cost component breakdown of the UBC-Services Index is not available; (3) Non-labour costs include air & sea freight costs, cargo handling costs and warehousing & storage costs.

(II) Latest Trends and Outlook for Key Cost Components

The ULC for the overall economy increased in 2022 at a faster pace than in 2021

The ULC for the overall economy rose by 8.5 per cent in 2022, faster than the 4.9 per cent increase in 2021.[7] With this increase, the ULC for the overall economy in 2022 was 4.3 per cent higher than its pre-COVID (2019) level.

The increase in the overall ULC in 2022 was due to a rise in total labour cost[8] (TLC) per worker (7.8 per cent) and a slight decline in labour productivity[9] (-0.6 per cent) (Exhibit 3). In turn, the increase in TLC per worker was driven by a pickup in remuneration per worker, and a tapering of the wage subsidies that were provided by the Government during the pandemic (e.g., Jobs Support Scheme).[10] Specifically, the increase in remuneration per worker and fall in wage subsidies per worker contributed 4.5pp and 3.2pp to the rise in TLC per worker in 2022 respectively.

At the sectoral level, all sectors except for the real estate sector experienced an increase in their ULCs in 2022 (Exhibit 4). The ULCs for the construction (11.5 per cent) and manufacturing (9.6 per cent) sectors increased on the back of a rise in TLC per worker alongside a decline in labour productivity.

Meanwhile, among the services sectors, the accommodation (26.5 per cent) and food & beverage services (15.1 per cent) sectors registered the largest increases in their ULCs. For the accommodation sector, the increase in its ULC was due to the combined effect of an increase in TLC per worker and a fall in labour productivity. On the other hand, the increase in ULC for the food & beverage services sector was due to a sharp increase in TLC per worker which outpaced gains in labour productivity.

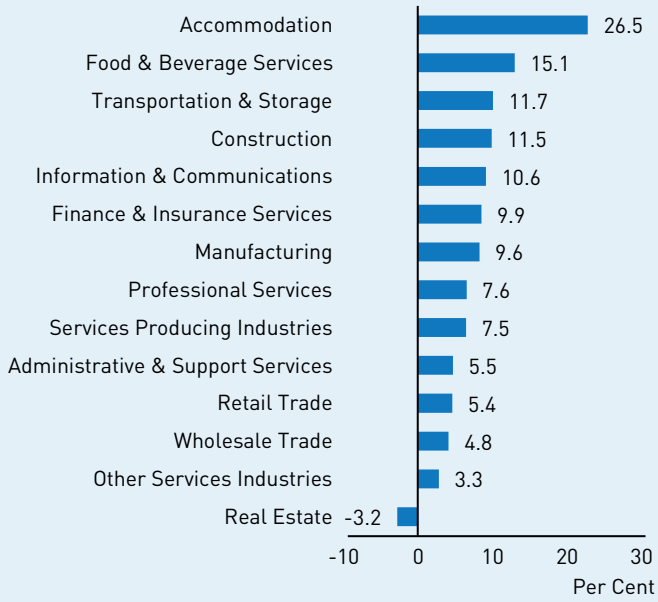
For 2023, the ULC for the overall economy is likely to continue to rise, albeit at a more moderate pace as compared to 2022, as the growth in renumeration per worker is likely to soften amidst global economic headwinds and a slowdown in the domestic economy.

7 *A change in the ULC can be approximately decomposed as the change in total labour cost per worker minus the change in labour productivity (proxied by gross real value-added per worker). The approximation holds better when the changes are small.*
8 *TLC comprises remuneration, wage subsidies and other labour-related costs, which include the skills development levy, foreign worker levy, and recruitment and net training costs. An example of a wage subsidy provided to firms is the Jobs Support Scheme (JSS), which was extended in 2021 to help firms affected by the COVID-19 pandemic retain their local employees. Specifically, the JSS provided wage support of up to 10 to 50 per cent (between 16 May 2021 and 19 December 2021) of the first $4,600 of gross monthly wages paid to local employees by eligible firms. The final payout for JSS based on wages from 1 November to 19 December was disbursed on 31 March 2022.*
9 *Labour productivity in this decomposition exercise is proxied by real gross value-added per worker.*
10 *In a given year, wage subsidies provided by the Government would reduce the TLC per worker. However, the tapering of wage subsidies from one year to the next would contribute positively to the changes in TLC per worker.*

Exhibit 3: Decomposition of ULC Growth for Overall Economy, 2022

ULC	**8.5%**
TLC per worker	**7.8%**
Remuneration per worker	+4.5pp
FWL per worker	+0.1pp
Wage subsidies per worker	+3.2pp
Other labour costs	-
Gross real labour productivity	**-0.6%**

Exhibit 4: ULC Change by Sectors, 2022



** Measured as real gross value-added per worker.*
Source: MTI Staff estimates using data from the Department of Statistics and Ministry of Manpower

Costs of utilities, fuel and transportation are likely to ease but remain elevated in 2023

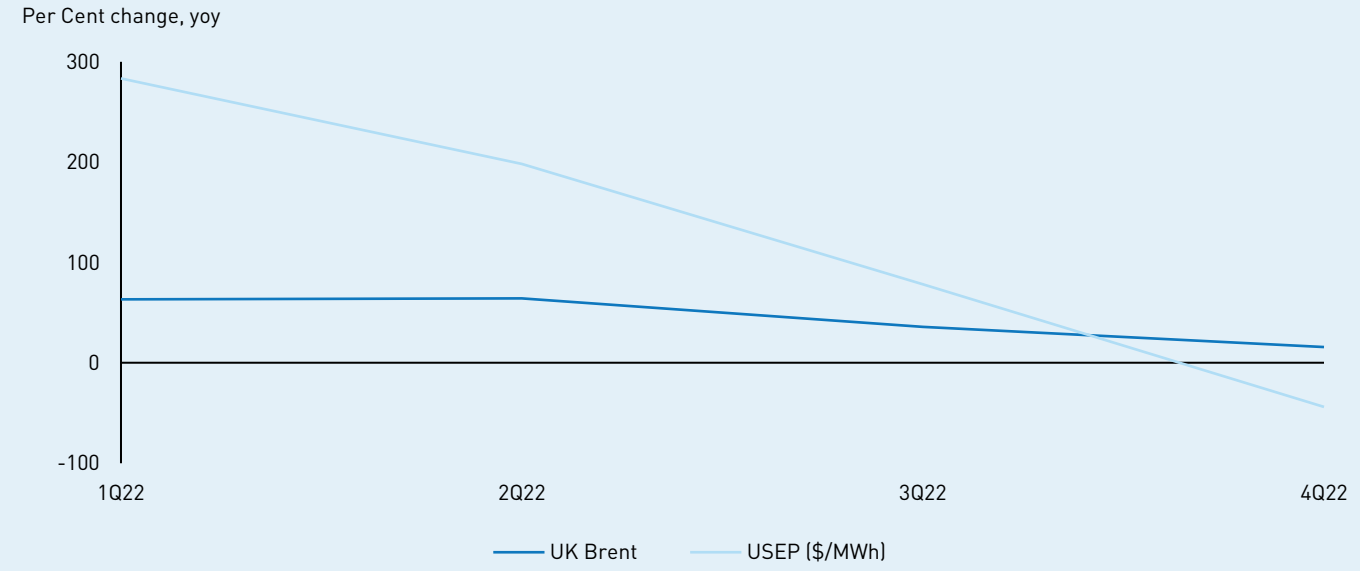
The cost of utilities borne by firms is closely linked to electricity prices,[11] which are in turn strongly influenced by movements in global oil prices.[12] Oil prices also contribute to business costs through fuel and transportation costs.

In 2022, the average wholesale electricity price rose by 49 per cent on the back of a spike in global oil prices and a corresponding pickup in natural gas prices.[13] The price hikes for oil and natural gas could be attributed in large part to tight global supply conditions that were exacerbated by the Russia-Ukraine war. In 4Q22, however, the average wholesale electricity prices fell on a year-on-year basis due to the high base a year ago arising from disruptions to the supply of Piped Natural Gas (PNG) to Singapore (Exhibit 5).

Looking ahead, while global oil prices have eased from the peaks in 2022 amidst concerns over the slowdown in the global economy, they are projected to remain elevated given continued tight supply conditions. For 2023 as a whole, the US Energy Information Administration has projected that global oil prices will average US$84 per barrel (/bbl)[14], lower than the 2022 average of US$101/bbl but higher than the 5-year annual average of US$60/bbl between 2017 and 2021. In turn, elevated oil prices will keep the domestic costs of utilities, fuel and transportation at elevated levels in 2023.

11 Electricity cost is a component of utilities cost, which forms a relatively small share of total business costs. For example, utilities cost accounts for 2.5 per cent to 3.1 per cent of business costs for SMEs and non-SMEs in the manufacturing sector respectively (refer to the Annex for details). Similarly, utilities cost is a relatively small cost component for firms in the services sectors, accounting for less than 2 per cent of the business costs of firms in most sectors.
12 Around 95 per cent of our electricity is generated from natural gas, the price of which is indexed to oil prices. This is a common market practice in Asia.
13 This is based on the average half-hourly Uniform Singapore Energy Price (USEP), which is a proxy for average wholesale energy prices in the National Electricity Market of Singapore.
14 EIA Short-Term Energy Outlook Report, February 2023.

Exhibit 5: Global Oil Prices and Uniform Singapore Energy Prices, 1Q22 – 4Q22



Source: International Monetary Fund, CEIC, Energy Market Company

Conclusion

In 2022, the UBC for the manufacturing sector rose, in large part due to the increase in manufacturing ULC as well as the higher costs of work given out and utilities. Similarly, the UBC for the overall services sector rose in the first three quarters of 2022 on account of an increase in non-labour costs and the services ULC.

Looking ahead, the overall ULC for the economy is likely to continue to rise in 2023, albeit at a more moderate pace as the growth in renumeration per worker is likely to soften amidst global economic headwinds and the slowdown in the domestic economy. At the same time, the costs of utilities, fuel and transportation are expected to ease but remain elevated, reflecting the outlook for global oil prices in 2023.

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Singapore Department of Statistics (2014), "Methodological Review on the Unit Business Cost Index for Manufacturing Industry (Base Year 2010=100)" November. https://www.singstat.gov.sg/-/media/files/publications/economy/ip-e38.pdf.

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ANNEX: BUSINESS COST STRUCTURE OF MANUFACTURING AND SERVICES SECTORS

Manufacturing Sector

In the manufacturing sector, labour cost, work given out and "others" constitute the largest components of business costs. These three components collectively account for around 84 per cent of the business costs of small- and medium-sized enterprises (SMEs) and around 73 per cent of the business costs of non-SMEs in the sector.

The remaining services cost components, including utilities, fuel, rental of building/premises and charges paid to other firms for inland transportation and ocean/air/other freight, make up a smaller share of business costs, at around 26 per cent for non-SMEs and 15 per cent for SMEs. Non-labour production taxes, which include property, road and other indirect taxes, account for around 0.6 per cent and 0.5 per cent of the business costs of SMEs and non-SMEs respectively.

Details of the business cost structure of SMEs and non-SMEs in the various manufacturing clusters are in Exhibit A1.

Services Sector

Labour cost is a major cost component for firms in the services sectors, with its share of business costs ranging from around 6 per cent for firms in the transportation & storage sector, to around 38 per cent or more for firms in labour-intensive sectors such as the food & beverage services, accommodation and retail trade sectors. Across all services sectors, except for the retail trade and transportation & storage sectors, the labour cost share of business costs is larger for SMEs than for non-SMEs.

On the other hand, utilities cost is a relatively small cost component for services firms, accounting for less than 2 per cent of the business costs of firms in most services sectors. Key exceptions are firms in the accommodation and food & beverage services sectors, where utilities cost constitutes around 6 per cent or less of their business costs. Similarly, rental cost accounts for a small share of the business costs of firms in most services sectors. Key exceptions include the retail trade and food & beverage services sectors, where the rental cost share of business costs for SMEs is 31 per cent and 26 per cent respectively.

Like in the manufacturing sector, non-labour production taxes account for less than 1 per cent of the business costs of firms in most services sectors. Even for the retail trade, accommodation and real estate, professional services & administrative & support services sectors, where the share of non-labour production taxes is the highest, it is relatively small, at around 3 per cent or less.

Details of the business cost structure of SMEs and non-SMEs in the various services sectors are in Exhibit A2.

Exhibit A1: Business Cost Structure of the Manufacturing Sector by Firm Size, 2021

	Total		Electronics		Chemicals		Biomedical Manufacturing		Precision Engineering		Transport Engineering		General Manufacturing	
	Non-SMEs	SMEs	Non-SMEs	SMEs	Non-SMEs	SMEs	Non-SMEs	SMEs	Non-SMEs	SMEs	Non-SMEs	SMEs	Non-SMEs	SMEs
Labour Cost	**18.2**	**32.1**	**11.5**	**8.6**	**15.4**	**28.1**	**25.4**	**13.7**	**29.8**	**49.2**	**34.9**	**50.3**	**37.1**	**47.5**
Services Cost	**81.3**	**67.3**	**88.3**	**90.9**	**83.6**	**71.0**	**74.2**	**85.9**	**69.8**	**50.1**	**63.2**	**49.0**	**62.3**	**51.8**
Work given out	20.1	20.8	25.8	44.2	6.6	3.1	10.5	16.0	11.0	15.8	36.9	17.8	7.4	12.5
Royalty payments	13.5	5.2	13.8	5.4	5.6	4.5	32.0	20.7	22.2	1.5	1.7	2.8	3.9	1.1
Utilities	3.1	2.5	2.3	0.4	7.1	9.4	1.4	0.7	1.5	2.1	1.8	1.4	6.8	2.8
Fuel	6.0	1.1	0.9	0.1	32.0	5.4	0.4	0.2	0.1	0.4	0.3	0.4	3.5	1.5
Rental of building/ premises	0.3	1.8	0.1	0.2	0.3	1.1	0.8	0.4	0.6	1.8	0.5	2.7	1.4	4.6
Charges paid to other firms for inland transportation and ocean/ air/ other freight	3.1	4.9	1.7	1.4	6.2	14.8	4.0	8.0	4.8	3.0	1.6	1.4	5.6	4.9
Others	35.2	31.1	43.6	39.4	25.9	32.7	25.2	39.9	29.5	25.6	20.4	22.5	33.8	24.3
Non-Labour Production Taxes	**0.5**	**0.6**	**0.2**	**0.4**	**1.0**	**0.9**	**0.3**	**0.4**	**0.4**	**0.7**	**1.9**	**0.7**	**0.6**	**0.7**

Source: Economic Development Board

Note: SMEs refer to enterprises with operating receipts of not more than $100 million or employment of not more than 200 workers. Non-SMEs refer to enterprises with operating receipts of more than $100 million and employment of more than 200 workers. *"Others" consists of sub-components such as professional fees, advertising, commission and agency fees, sundry expenses, etc.*

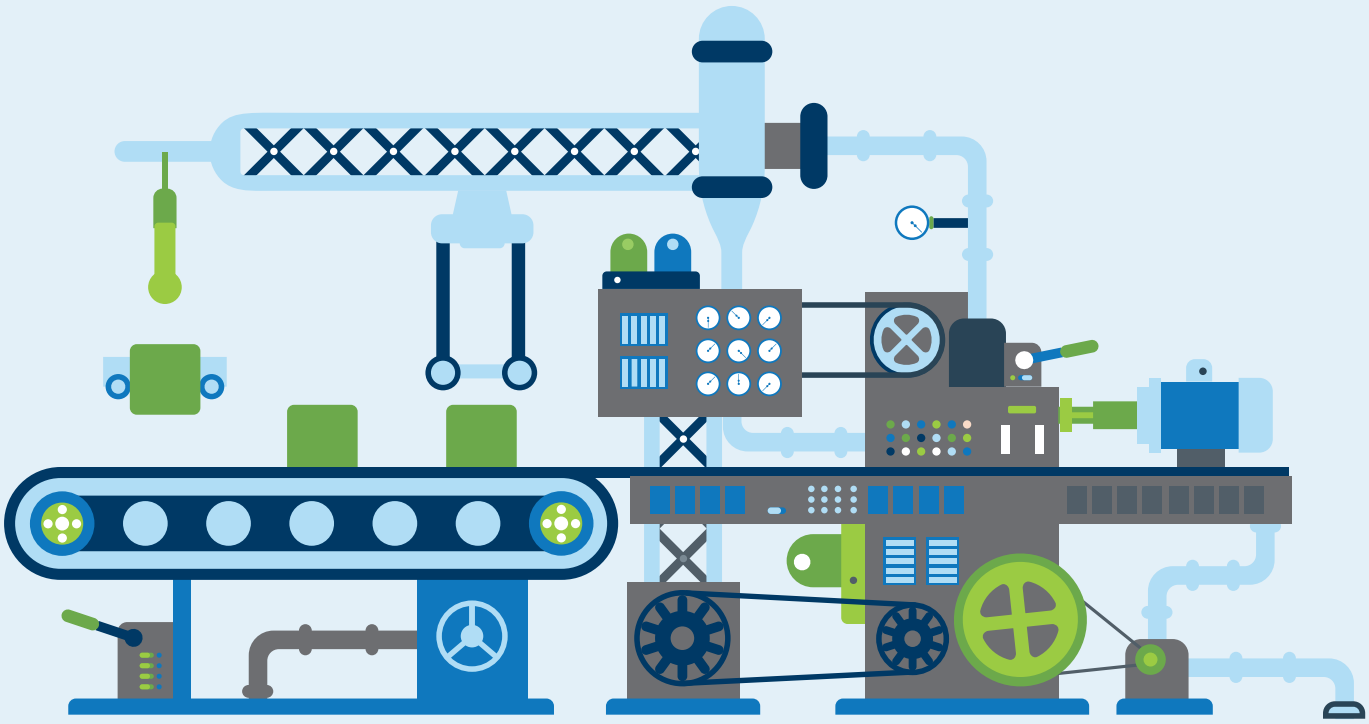
Exhibit A2: Business Cost Structure of the Services Sectors by Firm Size, 2021

	Wholesale Trade		Retail Trade		Accommodation^	Food & Beverage Services		Transportation & Storage		Information & Communications		Finance & Insurance		Real Estate, Professional Services and Administrative & Support Services	
	Non-SMEs	SMEs	Non-SMEs	SMEs		Non-SMEs	SMEs	Non-SMEs	SMEs	Non-SMEs	SMEs	Non-SMEs	SMEs	Non-SMEs	SMEs
Labour Cost	**16.1**	**17.0**	**42.1**	**36.8**	**46.4**	**45.0**	**46.5**	**12.9**	**3.9**	**13.3**	**21.3**	**12.2**	**15.5**	**32.1**	**34.8**
Services Cost	**83.7**	**82.3**	**56.6**	**62.4**	**50.6**	**54.7**	**53.2**	**86.7**	**96.0**	**86.4**	**78.2**	**87.6**	**84.2**	**66.1**	**63.0**
Utilities	0.3	0.2	2.8	1.4	6.4	3.9	4.8	0.5	0.1	0.5	0.6	-	0.1	0.4	0.9
Freight & Transport	16.7	39.7	4.7	2.6	-	2.6	1.0	55.3	71.8	0.2	0.7	-	-	1.1	1.5
Financial Services	3.0	1.9	1.9	2.5	1.8	0.8	1.4	0.4	0.3	0.5	1.9	5.0	5.8	0.1	1.0
Communications	0.5	0.3	0.3	0.8	0.7	0.2	0.5	0.4	0.3	2.8	8.1	0.2	0.3	0.2	0.4
Renting of Premises	2.2	4.9	24.4	30.5	13.3	20.8	26.1	0.8	1.2	1.1	3.2	0.8	1.3	1.7	4.3
Professional Services	7.9	4.2	1.9	2.4	2.5	1.1	1.5	1.0	0.7	12.7	12.1	3.2	4.7	10.1	6.8
Other Services	53.1	31.2	20.6	22.2	25.9	25.3	17.9	28.2	21.5	68.6	51.5	78.4	72.2	52.5	48.0
Advertising & Entertainment	3.9	4.3	4.3	6.3	2.6	3.8	2.2	0.2	0.3	14.6	14.0	1.8	0.8	0.5	4.1
Admin & Management Fees	12.5	7.1	1.9	3.0	6.2	3.2	3.3	3.2	1.5	3.4	11.2	4.6	11.9	4.7	11.4
Contract labour & work given out	15.2	2.4	0.8	1.3	1.8	1.4	2.1	1.6	0.7	4.2	7.2	0.3	0.3	25.9	9.6
Commission	2.6	5.7	1.2	3.5	1.8	1.1	2.0	1.5	2.0	2.0	1.9	3.9	8.3	1.1	5.5
Royalties	13.3	3.2	1.2	0.7	0.7	6.8	1.8	-	-	40.6	4.9	0.1	0.2	0.4	0.8
Maintenance & repairs	0.9	0.6	3.7	1.8	5.5	5.3	2.4	3.2	1.1	0.5	1.0	0.6	0.3	1.8	3.4
Fuel	-	0.8	0.1	0.1	-	0.1	-	13.1	12.4	-	-	-	-	-	0.3
Others	4.7	7.1	7.4	5.4	7.3	3.6	4.0	5.4	3.5	3.4	11.4	67.1	50.3	18.0	12.9
Non-Labour Production Taxes	**0.3**	**0.7**	**1.2**	**0.8**	**3.0**	**0.3**	**0.3**	**0.3**	**0.1**	**0.3**	**0.5**	**0.2**	**0.4**	**1.8**	**2.2**

Source: Department of Statistics and Monetary Authority of Singapore

Notes:

1. SMEs refer to enterprises with operating receipts of not more than $100 million or employment of not more than 200 workers. Non-SMEs refer to enterprises with operating receipts of more than $100 million and employment of more than 200 workers.
2. "-" refers to nil or negligible.
3. ^The breakdown of SMEs and non-SMEs for the accommodation sector is not available due to data suppression as most firms in the accommodation sector in 2021 would be considered SMEs by definition as a result of the effects of the COVID-19 pandemic on the activity of the sector.



CHAPTER

4

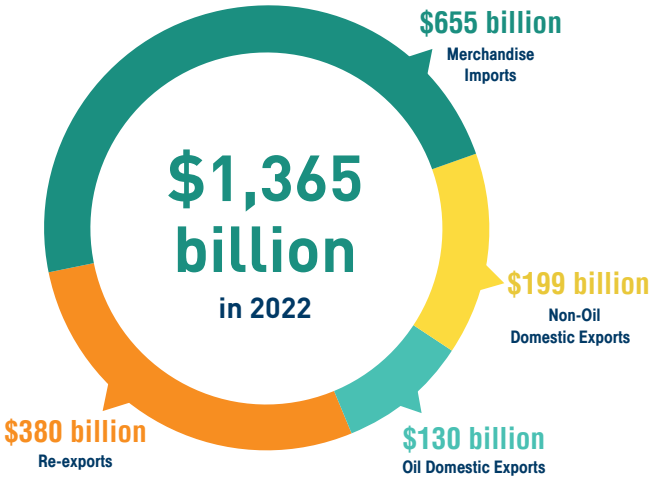
INTERNATIONAL TRADE

Image courtesy of PSA Singapore

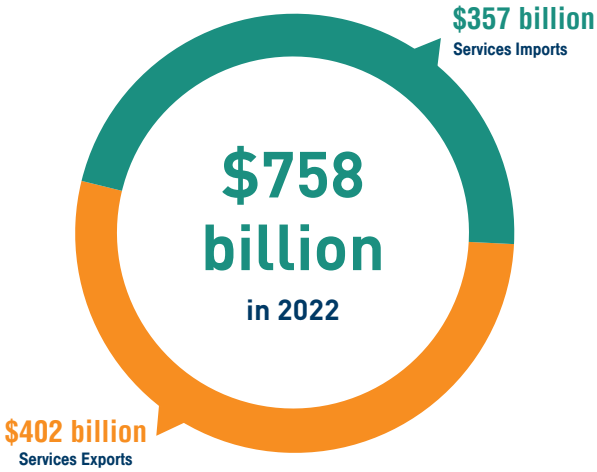
Chapter 4

INTERNATIONAL TRADE

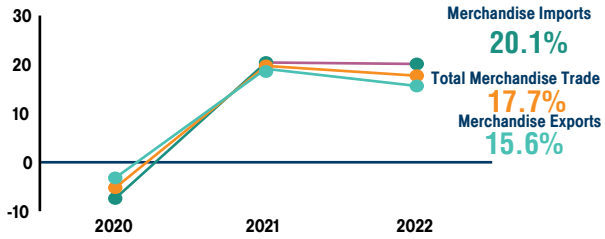
TOTAL MERCHANDISE TRADE AMOUNTED TO...



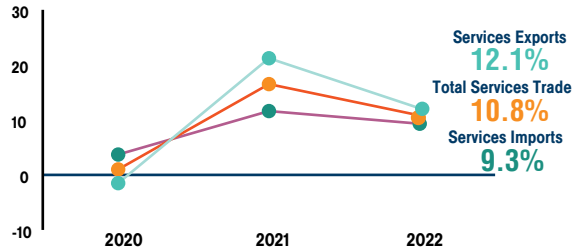
TOTAL SERVICES TRADE AMOUNTED TO...



GROWTH IN MERCHANDISE TRADE



GROWTH IN SERVICES TRADE



COMPONENTS OF MERCHANDISE EXPORTS

(Year-On-Year Growth)

THE INCREASE IN SERVICES EXPORTS WAS LED BY...

OVERVIEW

Singapore's total merchandise trade declined by 1.0 per cent year-on-year in the fourth quarter of 2022, a reversal from the 25.7 per cent growth in the previous quarter. At the same time, total services trade increased by 7.0 per cent year-on-year, extending the 12.5 per cent growth in the third quarter.

For the whole of 2022, Singapore's total merchandise trade surged by 17.7 per cent to $1.4 trillion, from $1.2 trillion in 2021. Oil trade expanded by 47.5 per cent amidst higher oil prices compared to a year ago, while non-oil trade grew by 11.9 per cent. Merchandise exports and imports increased by 15.6 per cent and 20.1 per cent respectively.

Total services trade rose robustly by 10.8 per cent to $758 billion in 2022, from $684 billion in 2021. Services exports and imports increased by 12.1 per cent and 9.3 per cent respectively in 2022.

MERCHANDISE TRADE

Merchandise Exports

Total merchandise exports fell by 2.3 per cent year-on-year in the fourth quarter, a sharp reversal from the 23.4 per cent increase in the previous quarter (Exhibit 4.1). The decline was due to both domestic exports and re-exports. Domestic exports dipped by 2.1 per cent, a pullback from the 27.9 per cent increase in the third quarter. Meanwhile, re-exports declined by 2.4 per cent, reversing from the 19.8 per cent increase in the previous quarter.

Exhibit 4.1: Growth Rates of Total Merchandise Trade, Merchandise Exports and Merchandise Imports (In Nominal Terms)

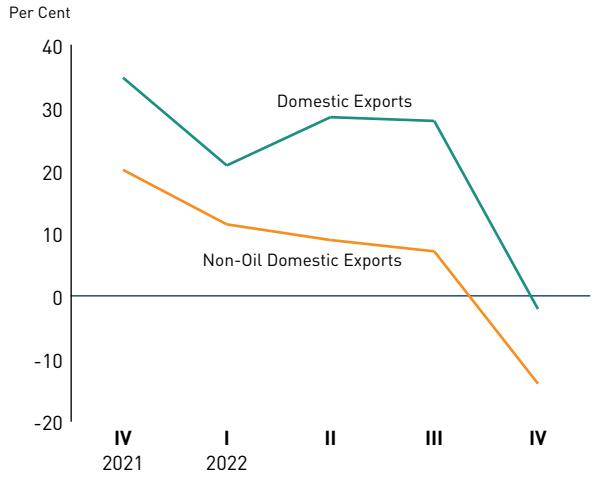
	2021	2022				2022
		I	II	III	IV	
Total Merchandise Trade	**19.7**	20.8	28.0	25.7	-1.0	**17.7**
Merchandise Exports	19.1	18.8	24.9	23.4	-2.3	**15.6**
Domestic Exports	19.0	20.8	28.5	27.9	-2.1	**18.2**
Oil	38.0	45.4	72.9	75.2	21.6	**52.4**
Non-Oil	12.1	11.4	8.9	7.1	-14.0	**3.0**
Re-Exports	19.2	17.2	21.7	19.8	-2.4	**13.5**
Merchandise Imports	20.4	23.1	31.6	28.1	0.5	**20.1**
Oil	49.4	50.7	66.7	58.8	8.2	**43.9**
Non-oil	15.3	17.4	23.5	21.2	-1.4	**14.6**

For the whole of 2022, total merchandise exports rose by 15.6 per cent, extending the 19.1 per cent increase recorded in 2021.

Non-Oil Domestic Exports

Non-oil domestic exports (NODX) declined by 14.0 per cent year-on-year in the fourth quarter, a reversal from the 7.1 per cent expansion in the preceding quarter (Exhibit 4.2). The plunge in NODX was due to a drop in both electronics and non-electronics NODX.

Exhibit 4.2: Changes in Domestic Exports

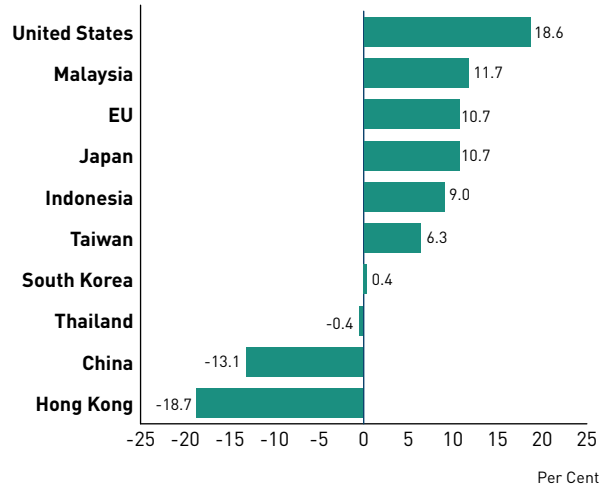


Electronics NODX declined by 15.9 per cent in the fourth quarter, extending the 1.8 per cent contraction in the previous quarter. The slump in electronics NODX was primarily due to a fall in the domestic exports of ICs, disk media products and parts of PCs. Non-electronics NODX declined by 13.4 per cent, reversing the 10.0 per cent growth in the previous quarter. The fall in non-electronics NODX was due to lower domestic exports of non-monetary gold, pharmaceuticals and petrochemicals.

For the full year, NODX expanded by 3.0 per cent, extending the 12.1 per cent growth in 2021. The growth in NODX was supported by increased shipments of both electronics (0.5 per cent) and non-electronics (3.8 per cent) products.

The top 10 NODX markets accounted for 78.6 per cent of Singapore's total NODX in 2022. Singapore's NODX to all the top 10 markets grew in 2022, except for China, Hong Kong and Thailand (Exhibit 4.3). The biggest contributors to the growth in NODX in 2022 were the US (18.6 per cent), EU 27 (10.7 per cent) and Malaysia (11.7 per cent).

Exhibit 4.3: Growth Rates of Non-Oil Domestic Exports to Top 10 Markets in 2022



NODX to the US expanded mainly because of a rise in the exports of structures of ships & boats, non-monetary gold and specialised machinery. NODX to EU 27 rose on the back of an increase in the exports of pharmaceuticals, specialised machinery and ICs. Meanwhile, ICs, specialised machinery and electrical machinery contributed the most to the rise in NODX to Malaysia. On the other hand, NODX to China fell due to lower exports of non-monetary gold, specialised machinery and primary chemicals.

Oil Domestic Exports

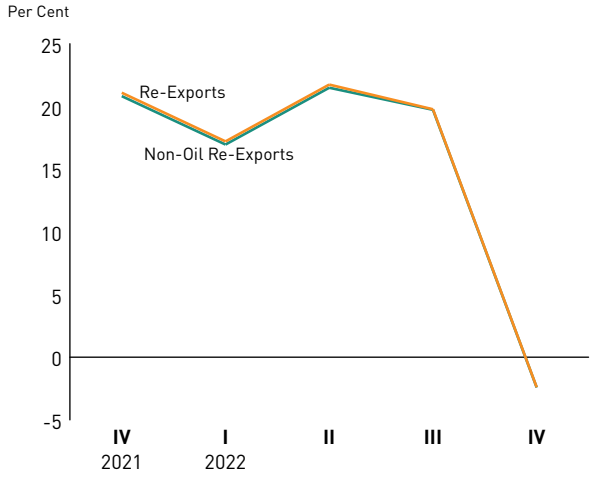
Oil domestic exports increased by 21.6 per cent year-on-year in the fourth quarter, extending the 75.2 per cent growth in the previous quarter. The growth in oil domestic exports was led by higher exports to countries such as New Zealand and EU 27. This increase also partly reflected higher oil prices compared to the same quarter a year ago. In volume terms, oil domestic exports expanded by 6.6 per cent, extending the 18.6 per cent increase in the third quarter.

For the full year, oil domestic exports posted robust growth of 52.4 per cent, faster than the 38.0 per cent increase in 2021. The increase in oil domestic exports was largely on account of higher oil prices compared to a year ago. By countries, it was driven mainly by higher exports to Malaysia, Indonesia and Australia. In volume terms, oil domestic exports rose by 1.7 per cent in 2022, reversing the 10.1 per cent decline in 2021.

Non-Oil Re-Exports

Non-oil re-exports (NORX) contracted by 2.4 per cent year-on-year in the fourth quarter, deteriorating from the 19.7 per cent increase in the preceding quarter (Exhibit 4.4). The decline in NORX could be attributed to a fall in electronics NORX, as non-electronics NORX rose. Electronics NORX decreased by 9.1 per cent, a reversal from the 10.5 per cent growth in the third quarter, as the re-exports of ICs, parts of PCs and PCs declined. Meanwhile, non-electronics NORX grew by 6.0 per cent, slowing from the 32.1 per cent increase in the preceding quarter. The expansion in non-electronics NORX was mainly due to the higher re-exports of specialised machinery, non-electric engines & motor and electrical machinery.

Exhibit 4.4: Changes in Re-Exports

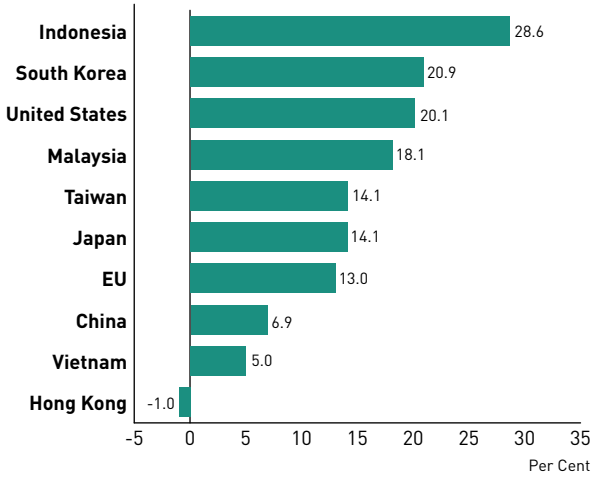


For the whole of 2022, NORX expanded by 13.4 per cent, slower than the 19.2 per cent growth in 2021. The growth in NORX was due to an increase in both electronics NORX (9.9 per cent) and non-electronics NORX (17.7 per cent).

NORX to all the top 10 NORX markets rose in 2022, except for Hong Kong (Exhibit 4.5). NORX to Indonesia increased on the back of a pickup in the re-exports of ICs, non-monetary gold and civil engineering equipment parts. Meanwhile, higher shipments of ICs, diodes & transistors and parts of PCs led to an increase in NORX to Malaysia.

Re-exports to the US grew on account of a rise in shipments of electrical machinery, ICs and non-electric engines & motors.

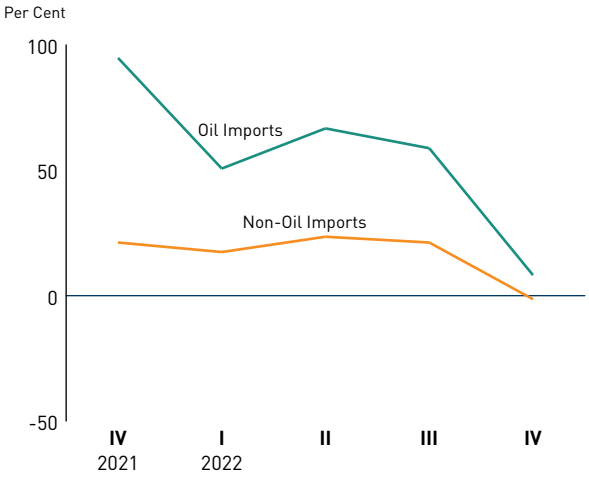
Exhibit 4.5: Growth Rates of Non-Oil Re-Exports to Top 10 Markets in 2022



Merchandise Imports

Non-oil imports registered a decline of 1.4 per cent year-on-year in the fourth quarter, a sharp pullback from the 21.2 per cent increase in the preceding quarter (Exhibit 4.6). The fall in non-oil imports was due to a decline in electronics imports (-6.0 per cent), while non-electronics imports grew (2.0 per cent). In turn, the decline in electronics imports was due to a drop in the imports of IC, PCs and parts of PCs. Meanwhile, non-electronics imports rose due to the imports of non-electric engines & motors, jewellery and works of art.

Exhibit 4.6: Changes in Merchandise Imports



Oil imports grew by 8.2 per cent year-on-year in the fourth quarter, slower than the 58.8 per cent increase in the preceding quarter. The increase in oil imports was due partly to higher oil prices. In volume terms, oil imports expanded by 6.0 per cent, following the 21.9 per cent increase in the third quarter.

For the full year of 2022, non-oil imports rose by 14.6 per cent, comparable to the 15.3 per cent growth in 2021. Meanwhile, oil imports picked up by 43.9 per cent, extending the 49.4 per cent growth in 2021.

Services Exports

Services exports increased by 8.2 per cent year-on-year in the fourth quarter, extending the 14.1 per cent expansion in the preceding quarter (Exhibit 4.7). The increase in services exports was primarily driven by a rise in the exports of travel services (255 per cent), other business services (6.2 per cent) and financial services (7.0 per cent). By contrast, the exports of transport services, manufacturing services and personal, cultural & recreation services shrank by 1.1 per cent, 15.6 per cent and 1.3 per cent respectively.

For the full year, services exports grew by 12.1 per cent, moderating from the 21.2 per cent increase in 2021. The increase in services exports was attributable mainly to an expansion in the exports of transport services (13.0 per cent), travel services (195 per cent) and other business services (8.3 per cent).

Exhibit 4.7: Growth Rates of Total Services Trade, Services Exports and Services Imports (In Nominal Terms)

	2021	2022				2022
		I	II	III	IV	
Total Services Trade	16.5	10.7	13.1	12.5	7.0	**10.8**
Services Exports	21.2	12.2	14.3	14.1	8.2	**12.1**
Services Imports	11.6	9.2	11.8	10.6	5.7	**9.3**

Services Imports

Services imports rose by 5.7 per cent year-on-year in the fourth quarter, slower than the 10.6 per cent increase in the previous quarter. The expansion in services imports was on account of a rise in the imports of travel services (303 per cent), telecommunications, computer & information services (4.6 per cent) and insurance services (3.3 per cent). Conversely, the imports of other business services, charges for the use of intellectual property and manufacturing services decreased by 1.1 per cent, 5.4 per cent and 6.4 per cent respectively.

For the whole of 2022, services imports expanded by 9.3 per cent, following the 11.6 per cent increase in 2021. The growth in services imports was due to expansions in the imports of travel services (279 per cent), transport services (7.1 per cent), and other business services (3.9 per cent). These gains were partially offset by slight drops in payments arising from charges for the use of intellectual property (-0.6 per cent) and the imports of financial services (-0.2 per cent).

CHAPTER

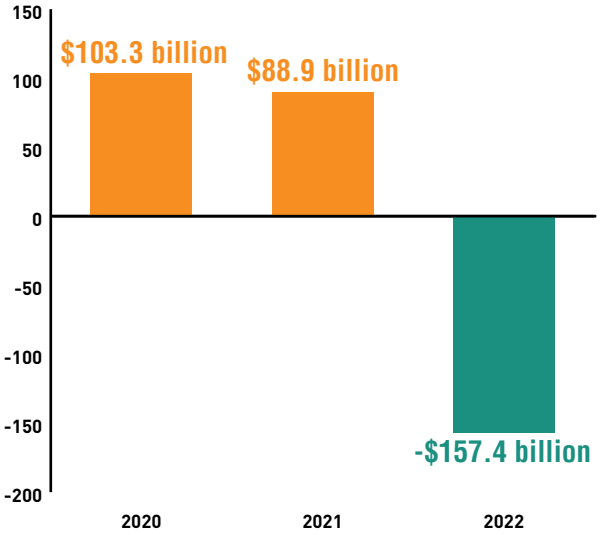
5

BALANCE OF PAYMENTS

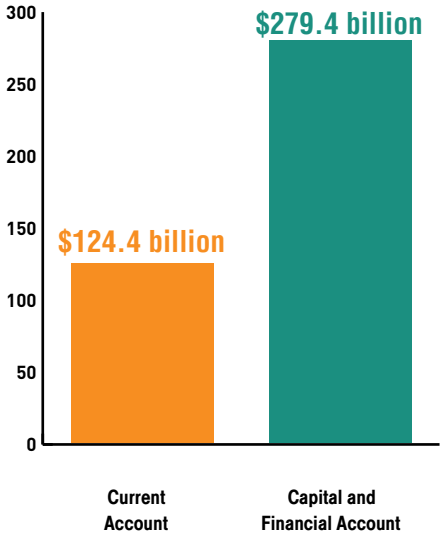
Chapter 5

BALANCE OF PAYMENTS

Singapore's balance of payments came in at a deficit of $157.4 billion at the end of 2022



BALANCE OF PAYMENTS COMPONENTS IN 2022



COMPONENTS OF CURRENT ACCOUNT

$188.2 billion
Goods Balance

$45.0 billion
Services Balance

-$103.6 billion
Primary Income Balance

-$5.2 billion
Secondary Income Balance

COMPONENTS OF CAPITAL & FINANCIAL ACCOUNT

-$124.2 billion
Direct Investment

$95.4 billion
Portfolio Investment

$3.1 billion
Financial Derivatives

$305.0 billion
Other Investment

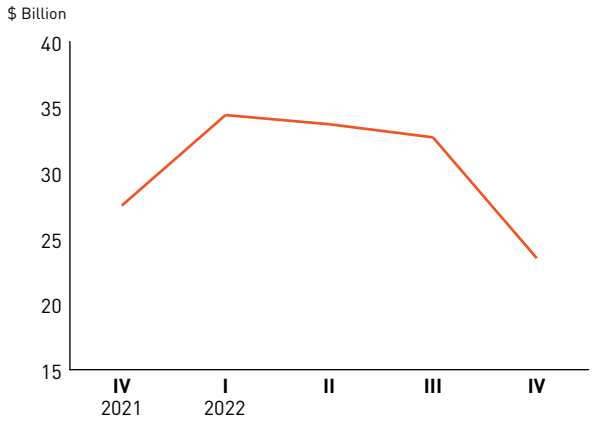
OVERVIEW

Singapore's overall balance of payments recorded a smaller deficit of $10.7 billion in the fourth quarter of 2022, compared to the deficit of $26.4 billion in the third quarter. For the whole of 2022, the overall balance of payments registered a deficit of $157 billion, a reversal from the surplus of $88.9 billion in 2021. The reversal was mainly due to a significant increase in net outflows from the capital and financial account. Singapore's official foreign reserves fell to $388 billion at the end of 2022.

CURRENT ACCOUNT

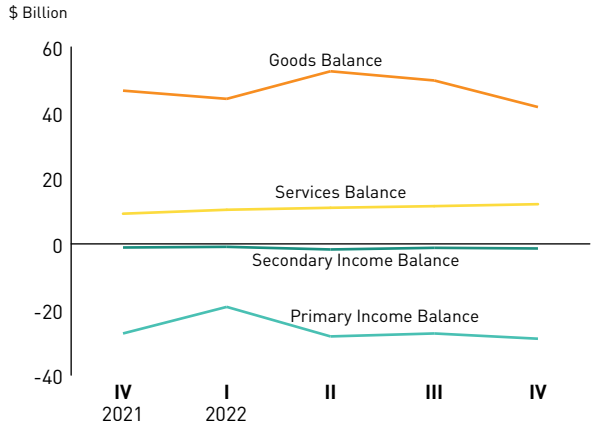
The current account surplus declined to $23.5 billion in the fourth quarter, from $32.7 billion in the third quarter (Exhibit 5.1). For 2022 as a whole, the current account surplus rose by $21.8 billion to $124 billion (19.3 per cent of GDP). The increase in surplus was driven by larger surpluses in the goods and services balances, which more than offset the larger primary and secondary income deficits.

Exhibit 5.1: Current Account Balance



In terms of the sub-components of the current account, the goods surplus fell to $41.7 billion in the fourth quarter, from $49.8 billion in the third quarter, as the decline in exports was more than that of imports (Exhibit 5.2). For 2022 as a whole, the goods balance registered a larger surplus of $188 billion, compared to the $169 billion recorded in 2021, as the exports of goods increased by more than imports.

Exhibit 5.2: Components of Current Account Balance



The surplus in the services balance came in at $12.1 billion in the fourth quarter, higher than the $11.5 billion in the preceding quarter. For the whole of 2022, the surplus in the services balance rose to $45.0 billion, from $31.8 billion in 2021. This was mainly driven by larger net receipts for transport services and financial services, lower net payments arising from charges for the use of intellectual property, and a shift from net payments to net receipts for other business services. These more than offset the increases in net payments for travel services and manufacturing services on physical inputs owned by others.

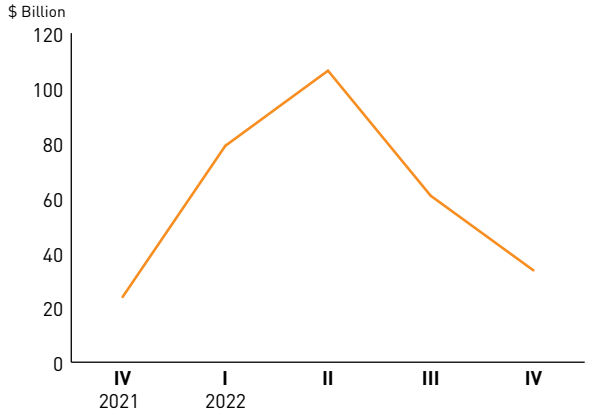
The primary income deficit increased by $1.6 billion from the previous quarter to $28.9 billion in the fourth quarter. For the year as a whole, the deficit widened by $10.4 billion to $104 billion, as payments rose by more than receipts.

The secondary income deficit widened to $1.4 billion in the fourth quarter, from $1.2 billion in the preceding quarter. For the year as a whole, the deficit increased by $0.3 billion to $5.2 billion as secondary income payments rose by more than receipts.

CAPITAL AND FINANCIAL ACCOUNT

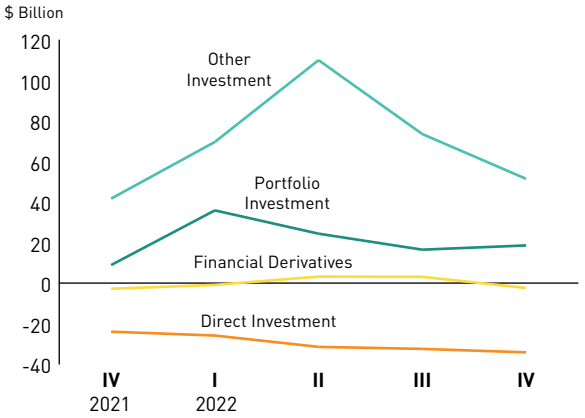
The capital and financial account[1] registered a smaller net outflow of $33.5 billion in the fourth quarter, compared to the $60.7 billion in the preceding quarter (Exhibit 5.3). For 2022 as a whole, net outflows amounted to $279 billion (43.4 per cent of GDP), an increase from the $11.4 billion in 2021. The step-up in net outflows was due to a sharp increase in net outflows for "other investment" and portfolio investment, as well as a shift from net inflows to net outflows for financial derivatives.

Exhibit 5.3: Capital and Financial Account Balance



In terms of the sub-components of the capital and financial account, net outflows of "other investment" came in at $51.5 billion in the fourth quarter, down from $73.6 billion in the preceding quarter (Exhibit 5.4). For the full year, net outflows of "other investment" reached $305 billion, a significant increase from the $49.9 billion registered in 2021. This was attributable in part to resident deposit-taking corporations seeing an increase in net outflows.

Exhibit 5.4: Components of Financial Account (Net)



Net outflows of portfolio investment rose to $18.6 billion in the fourth quarter, from $16.5 billion in the previous quarter. For the full year, net outflows of portfolio investment increased by $14.4 billion to $95.4 billion in 2022.

Financial derivatives switched to net inflows of $2.4 billion in the fourth quarter, from net outflows of $3.1 billion in the preceding quarter. However, for 2022 as a whole, financial derivatives reversed to a net outflow position of $3.1 billion, from a net inflow position of $1.6 billion in 2021.

Net inflows of direct investment reached $34.2 billion in the fourth quarter, higher than the $32.5 billion in the previous quarter. For 2022 as a whole, net inflows of direct investment rose by $6.3 billion to $124 billion, as the increase in foreign direct investment flows into Singapore exceeded that of residents' direct investment abroad.

1 *Net inflows in net balances are indicated by a minus (-) sign. For more details regarding the change in sign convention to the financial account, please refer to DOS's information paper on "Singapore's International Accounts: Methodological Updates and Recent Developments".*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CHAPTER

6

SECTORAL PERFORMANCE

Chapter 6

SECTORAL PERFORMANCE

OVERALL ECONOMY

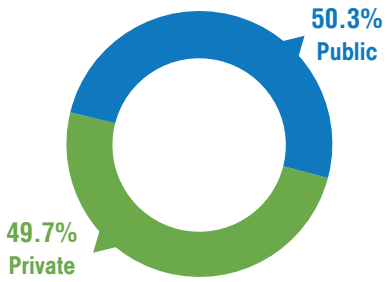
STRUCTURE OF ECONOMY	Nominal Value Added Share (%)	Real Growth (%)
Total	**100.0**	**3.6**
Goods Producing Industries	25.4	2.9
Manufacturing	21.6	2.5
Construction	2.7	6.7
Utilities	1.1	1.7
Other Goods Industries	0.0	-7.7
Services Producing Industries	71.3	4.8
Wholesale Trade	18.6	3.2
Retail Trade	1.3	8.4
Transportation & Storage	10.4	4.0
Accommodation	0.7	0.5
Food & Beverage Services	0.9	18.2
Information & Communications	5.4	8.6
Finance & Insurance	13.5	1.4
Real Estate	2.9	14.1
Professional Services	5.4	7.6
Administrative & Support Services	3.0	6.6
Other Services Industries	9.3	5.2
Ownership of Dwellings	3.3	0.4

MANUFACTURING

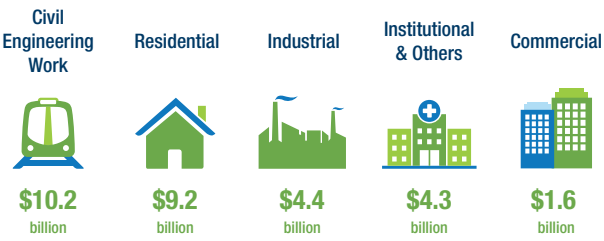
CLUSTERS	Nominal Value Added Share (%)	Real Growth (%)
Electronics	48.5	2.6
Chemicals	15.4	-5.5
Biomedical Manufacturing	11.3	-5.0
Precision Engineering	12.5	6.3
Transport Engineering	5.8	18.8
General Manufacturing Industries	6.4	10.1

CONSTRUCTION

CERTIFIED PAYMENTS IN 2022



CONTRACTS AWARDED IN 2022



WHOLESALE TRADE

Foreign Wholesale Trade Index growth
+3.1%

Domestic Wholesale Trade Index growth
-10.5%

RETAIL TRADE

Retail Sales Index Growth (Non-Motor Vehicles)
+11.8%

Retail Sales Index Growth (Motor Vehicles)
-19.8%

TRANSPORTATION & STORAGE

SEGMENTS	Nominal Value Added Share (%)	Real Growth (%)
Land Transport*	8.7	10.1
Water Transport*	74.3	1.1
Air Transport*	5.6	121.8
Storage & Other Support Services	9.7	-3.4
Post & Courier Activities	1.7	-4.9

*Including supporting services

+953.1% Air Passengers Handled Growth

-3.7% Total Sea Cargo Handled Growth

ACCOMMODATION

PERFORMANCE OF HOTELS

Hotel Room Revenue Growth
+235.3%

Gross Lettings Growth
+115.8%

FOOD & BEVERAGE SERVICES

PERFORMANCE OF F&B (SALES GROWTH)

Food Caterers
+92.4%

Restaurants
+27.3%

Cafes, Food Courts & Other Eating Places
+8.4%

Fast Food Outlets
+6.7%

INFORMATION & COMMUNICATIONS

SEGMENTS	Nominal Value Added Share (%)	Real Growth (%)
Telecommunications	13.5	-0.4
IT & Information Services	66.4	19.5
Others	20.1	-12.2

FINANCE & INSURANCE

SEGMENTS	Nominal Value Added Share (%)	Real Growth (%)
Banking	40.0	-5.7
Activities Auxiliary to Financial Services	21.4	11.3
Fund Management	12.4	2.9
Insurance	17.4	0.4
Others	8.8	7.8

REAL ESTATE

PRIVATE RESIDENTIAL

Units Transacted Growth
-34.8%

Price Index Growth
+8.6%

COMMERCIAL AND INDUSTRIAL (RENTAL INDEX GROWTH)

Commercial Office Space
+11.7%

Commercial Retail Space
-2.4%

Industrial Space Rental
+6.9%

OTHER SERVICES INDUSTRIES

SEGMENTS	Nominal Value Added Share (%)	Real Growth (%)
Public Administration & Defence	26.6	1.5
Education, Health & Social Work	53.8	3.5
Arts, Entertainment & Recreation	8.8	33.3
Others	10.8	5.4

PROFESSIONAL SERVICES

SEGMENTS	Nominal Value Added Share (%)	Real Growth (%)
Legal	8.4	-4.1
Accounting	6.9	15.0
Head Offices & Business Representative Offices	30.8	-0.7
Business & Management Consultancy	9.5	2.3
Architectural & Engineering, Technical Testing & Analysis	24.6	16.9
Other Professional, Scientific & Technical Services	19.8	16.8

ADMINISTRATIVE & SUPPORT SERVICES

SEGMENTS	Nominal Value Added Share (%)	Real Growth (%)
Rental & Leasing	44.2	-2.1
Other Administrative & Support Services	55.8	14.7

Chapter 6.1

MANUFACTURING

OVERVIEW

The manufacturing sector contracted by 2.6 per cent year-on-year in the fourth quarter of 2022, reversing the 1.1 per cent expansion in the preceding quarter. All clusters saw a fall in output during the quarter, except for the transport engineering and precision engineering clusters.

For the whole of 2022, the manufacturing sector grew by 2.5 per cent, slower than the 13.3 per cent growth in 2021. All clusters, except for the biomedical manufacturing and chemicals clusters, recorded output growth for the year.

OVERALL MANUFACTURING PERFORMANCE

Manufacturing output decreased by 2.6 per cent year-on-year in the fourth quarter on account of output contractions in all clusters, except for the transport engineering and precision engineering clusters (Exhibit 6.1).

For the whole of 2022, the manufacturing sector expanded by 2.5 per cent, slower than the 13.3 per cent growth in 2021. Growth of the sector was supported by output expansions in all clusters except for the biomedical manufacturing and chemicals clusters (Exhibit 6.2).

Exhibit 6.1: Manufacturing Growth Rates

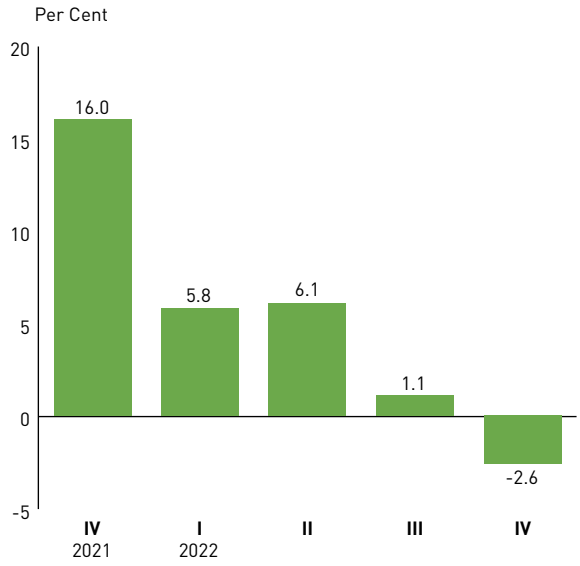
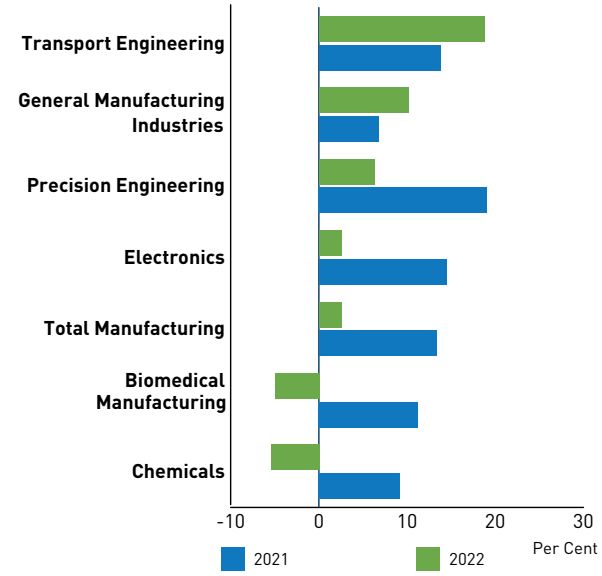


Exhibit 6.2: Manufacturing Clusters' Growth



PERFORMANCE OF CLUSTERS

Output in the transport engineering cluster rose by 11.5 per cent year-on-year in the fourth quarter, supported by expansions in the aerospace and marine & offshore engineering (M&OE) segments. In particular, output in the aerospace segment surged by 24.4 per cent due to higher demand for maintenance, repair and overhaul (MRO) jobs from commercial airlines as global air traffic continued to recover. Likewise, the M&OE segment expanded by 4.1 per cent, supported by a step-up in activity in offshore conversion projects, as well as an increase in production of oilfield and gasfield equipment. By contrast, the land segment contracted by 11.0 per cent. For the whole of 2022, the transport engineering cluster expanded by 18.8 per cent.

The precision engineering cluster grew by 6.1 per cent year-on-year in the fourth quarter, bolstered by the machinery & systems segment, which expanded by 11.2 per cent on the back of a rise in the production of semiconductor foundry equipment. On the other hand, output in the precision modules & components segment declined by 4.6 per cent, weighed down by a lower level of production of electronic connectors and bonding wire. For the full year, the precision engineering cluster expanded by 6.3 per cent.

The general manufacturing cluster contracted by 1.4 per cent year-on-year in the fourth quarter, led by a 7.8 per cent decline in the output of the miscellaneous industries segment. The latter was in turn due to a lower level of output of batteries and structural metal products. By contrast, the food, beverages & tobacco and printing segments recorded output expansions of 3.8 per cent and 0.5 per cent respectively, with the former recording an increase in output of dairy products. For the whole of 2022, the general manufacturing cluster grew by 10.1 per cent, with output expansions across all segments.

The electronics cluster contracted by 2.8 per cent year-on-year in the fourth quarter, driven by output contractions across most segments. Output in the other electronic modules & components (-19.3 per cent), semiconductors (-4.5 per cent) and computer peripherals & data storage (-1.8 per cent) segments declined on the back of softening external demand. By contrast, output in the infocomms & consumer electronics segment grew by 5.5 per cent. For the whole of 2022, the electronics cluster expanded by 2.6 per cent, with output expansions across all segments, except for the other electronic modules & components segment.

Output in the chemicals cluster fell by 10.1 per cent year-on-year in the fourth quarter, driven by output declines in the petrochemicals (-17.6 per cent), specialty chemicals (-10.1 per cent) and other chemicals (-7.8 per cent) segments. The petrochemicals segment recorded a lower level of output amidst plant maintenance shutdowns and weak market demand, while the specialties segment saw a fall in output due to lower levels of production of industrial gases and food additives. Meanwhile, the other chemicals segment contracted due to a drop in the output of fragrances. Conversely, the output of the petroleum segment grew by 9.5 per cent on account of higher demand for jet fuel, which was driven in turn by the continued recovery in global air travel. For the whole of 2022, the output of the chemicals cluster declined by 5.5 per cent.

The biomedical manufacturing cluster shrank by 10.5 per cent year-on-year in the fourth quarter due to output contractions across all segments. The output of the pharmaceuticals segment declined by 15.3 per cent because of a different mix of active pharmaceutical ingredients produced. Meanwhile, output in the medical technology segment fell by 3.4 per cent due to lower export demand for medical devices. For the whole of 2022, output in the biomedical manufacturing cluster declined by 5.0 per cent.

Chapter 6.2

CONSTRUCTION

OVERVIEW

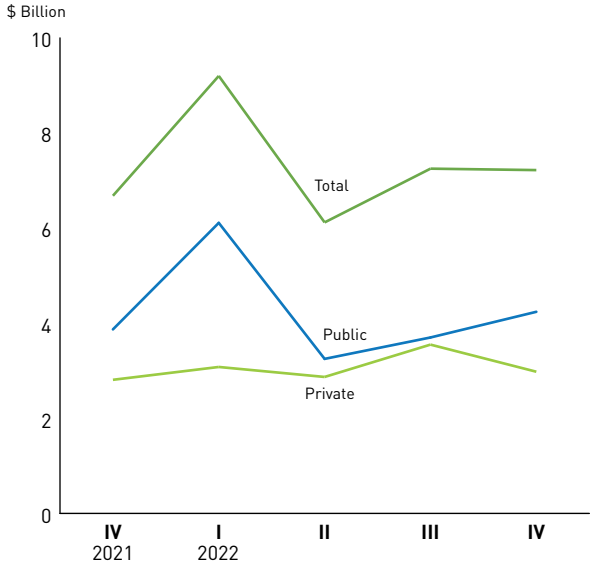
The construction sector grew by 10.0 per cent year-on-year in the fourth quarter of 2022, faster than the 8.1 per cent expansion in the previous quarter.

For the whole of 2022, the sector expanded by 6.7 per cent, slower than the 20.5 per cent growth in 2021.[1]

CONSTRUCTION DEMAND

Construction demand (contracts awarded) increased by 8.1 per cent year-on-year to $7.2 billion in the fourth quarter, supported by expansions in both public and private sector construction demand (Exhibit 6.3).

Exhibit 6.3: Contracts Awarded



For the full year, total construction demand fell by 0.5 per cent to $29.8 billion (Exhibit 6.4), as a 3.2 per cent increase in private sector construction demand was outweighed by a 3.0 per cent decline in public sector construction demand. The latter was due to a lower volume of public sector industrial building projects and civil engineering works.

Exhibit 6.4: Contracts Awarded, 2022 ($ Billion)

	Total	Public	Private
Total	29.8	17.3	12.5
Residential	9.2	5.3	3.9
Commercial	1.6	0.1	1.5
Industrial	4.4	0.4	4.1
Institutional & Others	4.3	2.9	1.4
Civil Engineering Works	10.2	8.6	1.6

Public Sector

In the fourth quarter, public sector construction demand grew by 9.5 per cent year-on-year to $4.2 billion. This was supported by higher demand for public residential (37.0 per cent) and institutional (202.5 per cent) building projects. However, these increases were partially offset by a reduction in contracts awarded for public commercial building (-29.9 per cent), industrial building (-87.2 per cent) and civil engineering (-11.2 per cent) works.

1 *The strong growth of the construction sector in 2021 was mainly due to the low base in 2020 caused by the Circuit Breaker and the slow resumption of construction activities following the Circuit Breaker.*

For the full year, public sector construction demand fell by 3.0 per cent to $17.3 billion. The decline was mainly due to a drop in contracts awarded for public industrial building (-62.4 per cent) and civil engineering (-6.2 per cent) works. Some of the major projects awarded during the year include (i) LTA's MRT contracts for the Cross Island Line (CRL) and Cross Island Line-Punggol Extension; (ii) MOH's SGH Elective Care Centre/National Dental Centre and Serangoon Polyclinic; and (iii) PA's Marine Parade Community Club.

Private Sector

In the fourth quarter, private sector construction demand increased by 6.1 per cent year-on-year to $3.0 billion. Except for industrial building projects, which registered a contraction (-64.0 per cent), all other types of projects saw an increase in demand, ranging from 84.1 per cent for residential projects to 596.1 per cent for institutional projects.

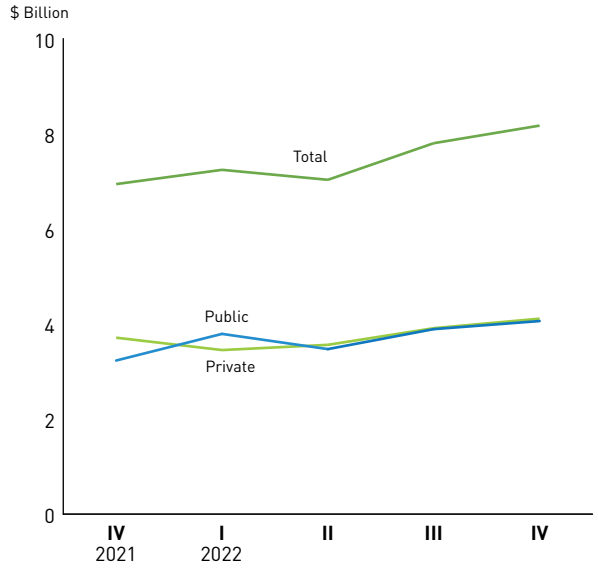
For the full year, private sector construction demand grew by 3.2 per cent to $12.5 billion, on the back of higher demand for private industrial building (0.8 per cent), institutional building (36.2 per cent) and civil engineering (260.3 per cent) projects. Major projects awarded in 2022 include (i) semiconductor fabrication plants at Pasir Ris and Tampines; (ii) a cogeneration plant at Jurong Island; (iii) retrofitting of Mount Elizabeth Hospital; (iv) construction of container berths at Tuas Terminal Finger 2; and (v) island-wide cabling projects.

CONSTRUCTION ACTIVITIES

Construction output (or nominal certified payments) rose by 17.7 per cent year-on-year to $8.2 billion in the fourth quarter, supported by expansions in both public and private sector construction output (Exhibit 6.5).

For the full year, construction output increased by 15.6 per cent to $30.2 billion, moderating from the 32.5 per cent growth in 2021.

Exhibit 6.5: Certified Payments



Public Sector

Public sector construction output rose by 25.6 per cent year-on-year to $4.1 billion in the fourth quarter. With the exception of public industrial building works, construction output for all types of works expanded, driven by public residential building (50.1 per cent), institutional building (31.2 per cent) and civil engineering (16.8 per cent) works.

For the full year, public sector construction output increased by 16.2 per cent to $15.2 billion, underpinned by public residential building (44.9 per cent), institutional building (9.5 per cent) and civil engineering (9.4 per cent) works. Major projects include (i) LTA's East Coast Integrated Depot, North South Corridor, Circle MRT Line 6 and Rapid Transit System Link; (ii) PUB's Deep Tunnel Sewerage System (Phase 2); (iii) MOH's Woodlands Health Campus, SGH Emergency Medicine Building and Integrated Care Hub; and (iv) Singapore Institute of Technology's Campus at Punggol.

Private Sector

In the fourth quarter, private sector construction output increased by 10.7 per cent year-on-year to $4.1 billion, as all types of private sector construction works, except for industrial and civil engineering works, expanded. These included private residential building (25.9 per cent), commercial building (35.5 per cent) and institutional building (11.7 per cent) works.

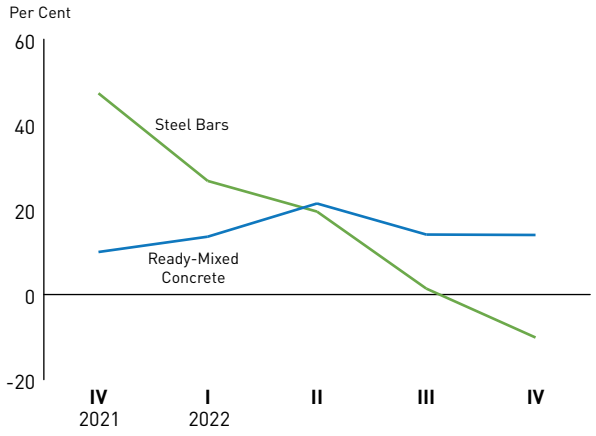
For the full year, private sector construction output increased by 15.0 per cent to $15.0 billion. All types of private construction output rose, led by private residential building (24.3 per cent) and commercial building (30.7 per cent) works. Major ongoing projects include (i) the redevelopment of past en-bloc sales sites and development of Government Land Sales (GLS) sites; (ii) refurbishment of existing hotels and development of new hotels; (iii) data centres; (iv) semiconductor production plants; (iv) Changi Airport Terminal 2 expansion; and (v) Mandai Wildlife Reserve developments.

CONSTRUCTION MATERIALS

In tandem with the rise in construction output, total consumption of steel rebars[2] rose by 31.1 per cent to 1.2 million tonnes in 2022. On the other hand, the total consumption of ready-mixed concrete edged down by 0.3 per cent in 2022 to 11.6 million m^3.

The average market price of Grade 40 pump ready-mixed concrete[3] increased by 14.0 per cent year-on-year to about $118.30 per m^3 in the fourth quarter (Exhibit 6.6). By contrast, the average market price of steel rebars[4] fell by 10.1 per cent to around $999.00 per tonne in the fourth quarter, following the easing of raw material costs and freight rates in the second half of 2022.

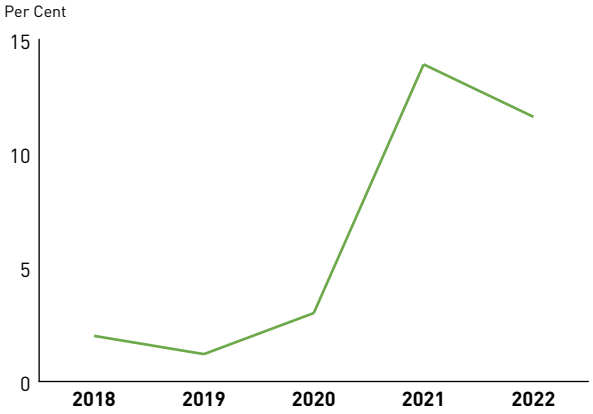
Exhibit 6.6: Changes in Market Prices of Construction Materials



CONSTRUCTION COSTS

Based on BCA's Building Works Tender Price Index (TPI), tender prices increased by about 11.6 per cent in 2022. This was mainly driven by higher input costs resulting from global supply disruptions that were exacerbated by the Russia-Ukraine war (Exhibit 6.7). Looking ahead, barring fresh supply shocks to key global construction resources, the uptrend in BCA's TPI is expected to ease in 2023 in tandem with the moderation of some input prices from their highs in the first half of 2022, as well as an anticipated slowdown in the global economy.

Exhibit 6.7: Changes in Tender Price Index



2 Rebar consumption is estimated from net imports plus local production (without factoring in stock levels).
3 The market prices are based on contracts with non-fixed price, fixed price and market retail price.
4 The market prices refer to 16mm to 32mm High Tensile rebar and are based on fixed price supply contracts with a contract period of 12 months or below.

CONSTRUCTION OUTLOOK FOR 2023

According to BCA, total construction demand is projected to be between $27.0 billion and $32.0 billion in 2023 (Exhibit 6.8). In particular, demand from the public sector is expected to stay firm at between $16.0 billion and $19.0 billion, supported by a continued strong pipeline of public housing, institutional building and infrastructure projects. Meanwhile, total private sector construction demand is projected to be between $11.0 billion and $13.0 billion in 2023, comparable to the annual volume in the previous two years. This is expected to be supported by (i) a ramp-up in Build-To-Order HDB flats; (ii) the Central Business District (CBD) Incentive Scheme on conversion to residences; (iii) commercial building redevelopments; (iv) high-specification industrial buildings; and (v) mechanical & electrical contracts for North South Corridor, CRL and Jurong Region MRT Line.

Total construction output in 2023 is projected to increase to between $30.0 billion and $33.0 billion, supported by a steady level of construction demand and some remaining backlogs of construction works that were disrupted by the COVID-19 pandemic.

Exhibit 6.8: Projected Construction Demand in 2023

	$ Billion
Public Sector	**16.0 – 19.0**
Building Construction Sub-total	**8.6 – 10.9**
Residential	4.7 – 6.3
Commercial	0.1 – 0.1
Industrial	0.8 – 1.0
Institutional & Others	2.9 – 3.5
Civil Engineering Works Sub-total	**7.5 – 8.1**
Private Sector	**11.0 – 13.0**
Building Construction Sub-total	**10.2 – 12.0**
Residential	3.6 – 4.0
Commercial	2.5 – 3.0
Industrial	3.3 – 4.0
Institutional & Others	0.8 – 1.0
Civil Engineering Works Sub-total	**0.8 – 1.0**
TOTAL CONSTRUCTION DEMAND	**27.0 – 32.0**

Chapter 6.3

WHOLESALE TRADE

OVERVIEW

The wholesale trade sector expanded by 2.4 per cent year-on-year in the fourth quarter of 2022, moderating from the 4.1 per cent growth in the previous quarter. Growth during the quarter came largely on the back of an increase in the volume of foreign wholesale sales of petroleum & petroleum products and telecommunications & computers.

For the whole of 2022, the sector grew by 3.2 per cent, slowing from the 9.6 per cent expansion in 2021.

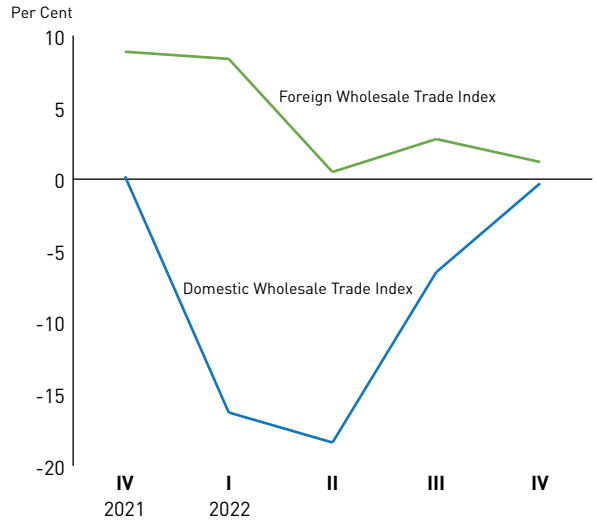
WHOLESALE SALES

In the fourth quarter, the wholesale trade sector was supported by an increase in foreign wholesale sales volume, which outweighed a decline in domestic wholesale sales volume.

Specifically, foreign wholesale sales volume rose by 1.2 per cent year-on-year in the fourth quarter, moderating from the 2.8 per cent increase in the preceding quarter (Exhibit 6.9). Growth was largely due to an increase in the sales volumes of petroleum & petroleum-related products (3.3 per cent), telecommunications & computers (7.4 per cent) and other wholesale trade[5] (5.3 per cent), which outweighed a decline in the sales volume of metals, timber & construction materials (-13.5 per cent). For the whole of 2022, the foreign wholesale trade index rose by 3.1 per cent, easing from the 8.8 per cent increase in the previous year.

Meanwhile, domestic wholesale sales volume fell by 0.3 per cent year-on-year in the fourth quarter, extending the 6.5 per cent contraction in the preceding quarter. The decline was led by weaker sales volumes in segments such as telecommunications & computers (-18.9 per cent) and chemicals & chemical products (-23.3 per cent), which outweighed increases in the sales volumes of petroleum & petroleum products (4.2 per cent), ship chandlers & bunkering (18.1 per cent) and other wholesale trade (9.2 per cent). For the whole of 2022, the domestic wholesale trade index fell by 10.5 per cent, worsening from the 0.5 per cent decline recorded in 2021.

Exhibit 6.9: Changes in Wholesale Trade Index in Chained Volume Terms



5 *The "other wholesale trade" segment consists of a diverse range of products that include agricultural raw materials and live animals, tropical produce, personal effects and medicinal and pharmaceutical products, among others.*

Chapter 6.4

RETAIL TRADE

OVERVIEW

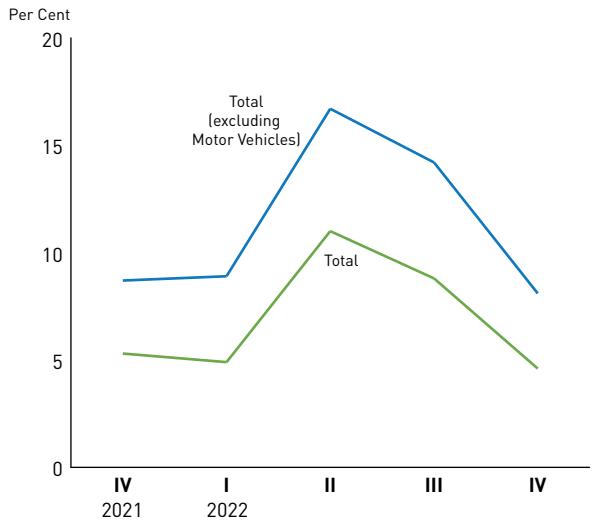
The retail trade sector grew by 5.1 per cent year-on-year in the fourth quarter of 2022, moderating from the 8.8 per cent growth in the previous quarter.

For the whole of 2022, the sector expanded by 8.4 per cent, extending the 12.0 per cent growth in 2021.

RETAIL SALES

Overall retail sales volume increased by 4.6 per cent year-on-year in the fourth quarter, slower than the 8.8 per cent growth in the third quarter (Exhibit 6.10). Overall retail sales were supported by an increase in non-motor vehicle sales volume (8.1 per cent), which saw broad-based growth across segments. In particular, the sales volumes of food & alcohol (41.2 per cent), wearing apparel & footwear (27.8 per cent), watches & jewellery (20.2 per cent), department stores (18.5 per cent) and cosmetics, toiletries & medical goods (15.5 per cent) registered the strongest growth. On the other hand, the sales volumes of supermarkets & hypermarkets (-9.0 per cent), mini-marts & convenience stores (-5.2 per cent) and petrol service stations (-2.8 per cent) registered the largest declines. Meanwhile, motor vehicle sales volume fell by 19.8 per cent due to a reduction in COE quotas.

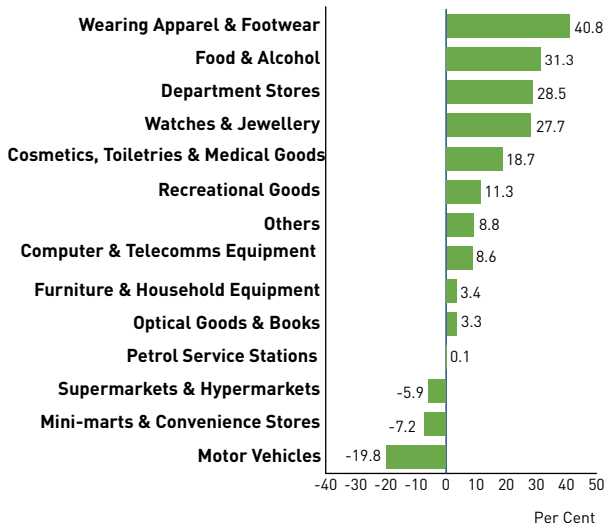
Exhibit 6.10: Changes in Retail Sales Index in Chained Volume Terms



For the full year, overall retail sales volume rose by 7.2 per cent, extending the 11.2 per cent expansion in 2021. With this increase, overall retail sales volumes have recovered to 2019 (pre-pandemic) levels on a full-year basis.

In 2022, non-motor vehicle sales volume rose (11.8 per cent) while motor vehicle sales volume declined (-19.8 per cent). The growth in non-motor vehicle sales volume was led by the sales of wearing apparel & footwear (40.8 per cent), food & alcohol (31.3 per cent), department stores (28.5 per cent) and watches & jewellery (27.7 per cent). Meanwhile, the sales volumes of mini-marts & convenience stores (-7.2 per cent) and supermarkets & hypermarkets (-5.9 per cent) fell (Exhibit 6.11).

Exhibit 6.11: Changes in Retail Sales Index in Chained Volume Terms for Major Segments in 2022



Chapter 6.5

TRANSPORTATION & STORAGE

OVERVIEW

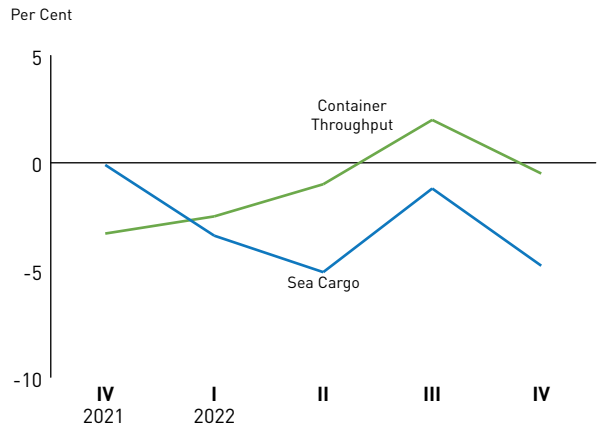
TThe transportation & storage sector expanded by 2.5 per cent year-on-year in the fourth quarter of 2022, moderating from the 6.1 per cent growth in the previous quarter.

For the whole of 2022, the sector grew at a slower pace of 4.0 per cent compared to the 9.9 per cent expansion recorded in 2021. The expansion of the sector was supported largely by the air transport, land transport and water transport segments.

WATER TRANSPORT

Container throughput fell by 0.5 per cent year-on-year in the fourth quarter, a reversal from the 2.0 per cent expansion in the previous quarter (Exhibit 6.12). For the full year, the number of TEUs (Twenty-Foot Equivalent Units) handled by Singapore's ports came in at 37.3 million, representing a 0.5 per cent decline from 2021's level. This was a reversal from the 1.6 per cent increase recorded in 2021.

Exhibit 6.12: Changes in Container Throughput and Sea Cargo Handled



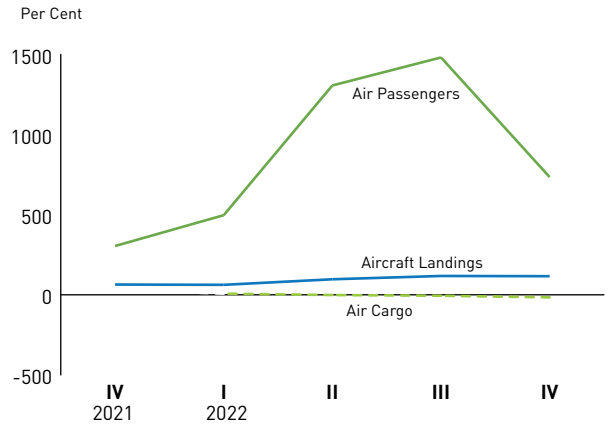
Overall sea cargo volume declined by 4.8 per cent in the fourth quarter, extending the 1.2 per cent contraction in the preceding quarter. The fall in sea cargo volume was largely due to general cargo shipments, which declined by 8.3 per cent during the quarter, an extension of the 3.0 per cent contraction registered in the third quarter. For the whole of 2022, overall sea cargo volume fell by 3.7 per cent, reversing the 1.5 per cent growth in the previous year.

AIR TRANSPORT

Total air passenger traffic (less transit) handled by Changi Airport climbed by 735 per cent year-on-year in the fourth quarter, extending the 1,481 per cent growth in the previous quarter (Exhibit 6.13). Nonetheless, in absolute terms, air passenger traffic volume had only recovered to 69.0 per cent of the volume seen in the fourth quarter of 2019 (pre-pandemic).

For the full year, total air passenger traffic passing through Changi Airport surged by 953 per cent to come in at 31.9 million. This was a marked turnaround from the 74.0 per cent plunge in 2021.

Exhibit 6.13: Changes in Air Transport



At the same time, air cargo volume fell by 16.1 per cent year-on-year in the fourth quarter, extending the 6.0 per cent contraction in the previous quarter. In absolute terms, total air cargo volume was at 87.3 per cent of pre-pandemic levels (i.e., in the fourth quarter of 2019). For 2022 as a whole, air cargo shipments declined by 4.8 per cent, a sharp pullback from the 26.1 per cent expansion in 2021.

Meanwhile, aircraft landings climbed by 116 per cent on-year to reach 35,368 in the fourth quarter, following the 117 per cent increase in the third quarter. This brought the total number of aircraft landings in 2022 to 109,246, which was 101 per cent higher compared to that in 2021.

Chapter 6.6

ACCOMMODATION

OVERVIEW

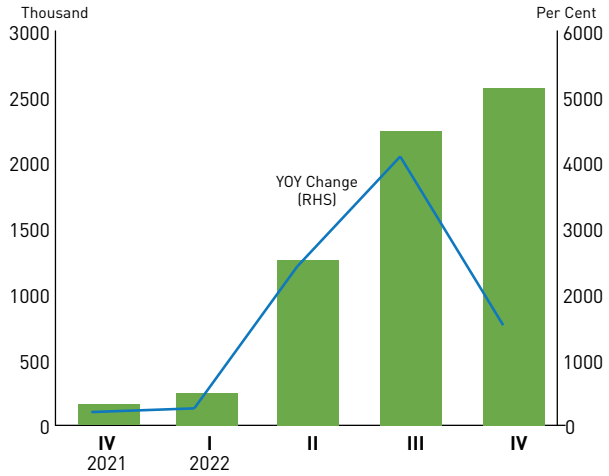
The accommodation sector grew by 7.8 per cent year-on-year in the fourth quarter of 2022, accelerating from the 1.6 per cent expansion in the previous quarter.

For the whole of 2022, the sector expanded by 0.5 per cent, a turnaround from the 9.1 per cent contraction in 2021.

VISITOR ARRIVALS

Singapore received around 2.6 million visitors in the fourth quarter, 1,523 per cent higher compared to the same period a year ago (Exhibit 6.14). The sharp increase in visitor arrivals was due to the relaxation of inbound travel restrictions relative to 2021 with the rollout of the Vaccinated Travel Framework (VTF) in April 2022. Compared to the same period in 2019, visitor arrivals remained 46.5 per cent lower. For the full year, visitor arrivals increased by 1,810 per cent, a significant turnaround from the 88.0 per cent decline recorded in 2021.

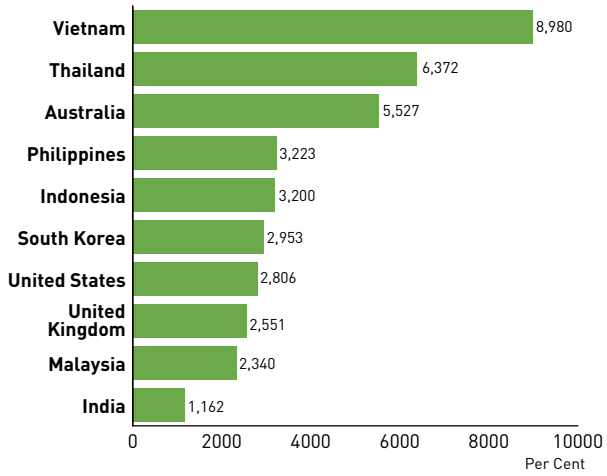
Exhibit 6.14: Visitor Arrivals



In terms of source markets, Singapore's top five visitor-generating markets in 2022 were Indonesia (1.1 million visitors), India (686,000 visitors), Malaysia (591,000 visitors), Australia (566,000 visitors) and the Philippines (382,000 visitors). Together, they accounted for 52.8 per cent of total visitor arrivals in 2022.

Among the top 10 visitor-generating markets, Vietnam (8,980 per cent), Thailand (6,372 per cent) and Australia (5,527 per cent) posted the strongest growth in visitor arrivals in 2022 (Exhibit 6.15).

Exhibit 6.15: Growth Rates of Top 10 Visitor-Generating Markets in 2022

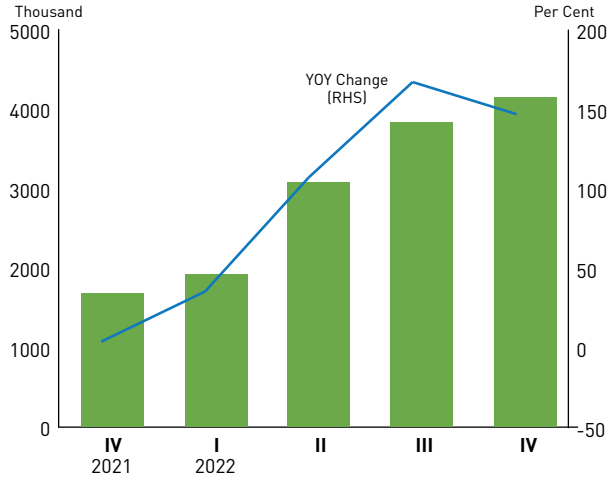


ACCOMMODATION

In tandem with the strong recovery in visitor arrivals, gross lettings of gazetted hotel rooms grew robustly by 147 per cent year-on-year in the fourth quarter, extending the 167 per cent growth in the previous quarter (Exhibit 6.16). Similarly, room revenue surged by 274 per cent year-on-year, extending the 363 per cent increase in the preceding quarter. Higher room revenue was accompanied by a rise in both the average occupancy rate of gazetted hotels and the average daily room rate. Specifically, the average occupancy rate rose by 11.2 percentage-points to 83.3 per cent, while the average daily room rate increased by 51.4 per cent to $283 in the fourth quarter.

For 2022 as a whole, the accommodation sector grew by a modest 0.5 per cent, as the recovery in tourism demand was largely offset by a reduction in government bookings[6]. The overall room revenue of gazetted hotels climbed by 235 per cent to reach $3.2 million in 2022, driven by a 116 percent expansion in gross lettings and a 55.1 increase in the average daily room rate.

Exhibit 6.16: Gross Lettings



6 *The gross lettings and room rates data do not include hotel rooms contracted by the Government to serve as government quarantine facilities (GQFs) or stay-home-notice dedicated facilities (SDFs).*

Chapter 6.7

FOOD & BEVERAGE SERVICES

OVERVIEW

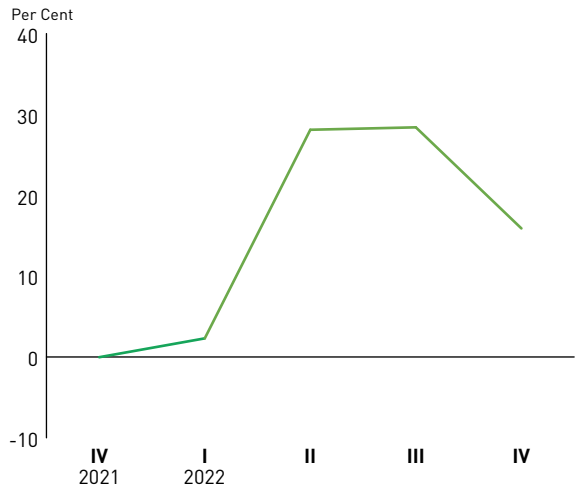
The food & beverage services sector grew by 19.6 per cent year-on-year in the fourth quarter of 2022, extending the 29.3 per cent growth in the previous quarter.

For the whole of 2022, the sector expanded at a faster pace of 18.2 per cent compared to the 1.8 per cent growth in 2021.

FOOD & BEVERAGE SALES

Overall food & beverage sales volume increased by 15.9 per cent year-on-year in the fourth quarter, extending the 28.4 per cent expansion in the preceding quarter (Exhibit 6.17). The growth in sales volume came on the back of the relaxation of dine-in restrictions compared to the Stabilisation Phase in the fourth quarter of 2021[7]. Sales volumes saw broad-based growth, led by the food caterers segment (118 per cent). At the same time, the restaurants (16.8 per cent), fast food outlets (9.7 per cent) and cafes, food courts & other eating places (6.6 per cent) segments also saw strong growth. The robust growth seen in the food caterers segment was due to the lifting of restrictions on events, which led to a strong recovery in leisure, business and MICE events. However, relative to the same period in 2019, the sales volume in the food caterers segment remained 23.4 per cent lower.

Exhibit 6.17: Changes in Food and Beverage Services Index in Chained Volume Terms



For the whole of 2022, the food & beverage services volume index grew by 18.0 per cent. This was an acceleration of the 2.8 per cent increase recorded in 2021. Nonetheless, the overall food & beverage sales volume remained 10.8 per cent lower than that in 2019. At the segment level, the sales volumes of restaurants (27.3 per cent), food caterers (92.4 per cent), fast food outlets (6.7 per cent) and cafes, food courts & other eating places (8.4 per cent) all increased in 2022.

7 *For instance, from 1 October to 9 November 2021, dine-in group sizes were restricted to no more than two vaccinated persons.*

Chapter 6.8

INFORMATION & COMMUNICATIONS

OVERVIEW

The information & communications sector expanded by 5.6 per cent year-on-year in the fourth quarter of 2022, extending the 6.9 per cent growth in the previous quarter. This positive outturn was largely due to the IT & information services segment, while the telecommunications segment saw more modest growth during the quarter. On the other hand, the "others" segment[8] contracted.

For the whole of 2022, the sector grew by 8.6 per cent, a slowdown from the 13.4 per cent expansion in 2021.

IT & INFORMATION SERVICES

In 2022, the growth of the information & communications sector was led by the IT & information services segment. Specifically, the segment expanded by 19.5 per cent, driven by strong enterprise demand for digital solutions and services.

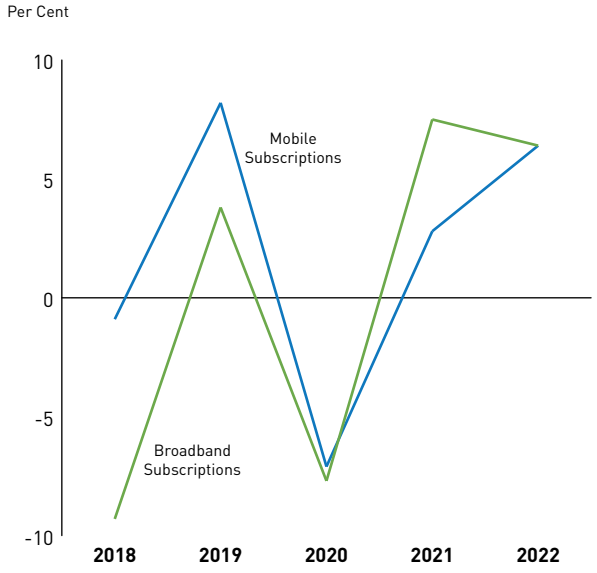
TELECOMMUNICATIONS

The telecommunications segment shrank by 0.4 per cent in 2022, weighed down by weaker demand for fixed line services. For instance, the total number of fixed line subscribers declined by 2.6 per cent on a year-on-year basis in the third quarter of 2022. This was partially offset by an increase in mobile and broadband subscriptions over the same period.

In September 2022[9], the number of mobile subscriptions grew by 6.4 per cent compared to the same period in 2021 (Exhibit 6.18). While there was a 24.7 per cent decline in the number of 3G subscriptions to 527,000, this was offset by a 9.3 per cent increase in 4G subscriptions to around 8.7 million.

In September 2022, the number of broadband subscriptions rose by 6.4 per cent. The increase was broad-based, led by a 7.0 per cent increase in wireless broadband subscriptions.

Exhibit 6.18: Information & Communications Growth



8 *The "others" segment consists of (i) publishing activities (including computer games and software publishing), (ii) motion picture, video and other programme production, sound recording, and music publishing activities, and (iii) radio and television broadcasting activities.*

9 *Full-year data are not available at the time of publication. October and November data are available but subject to further revisions.*

Chapter 6.9

FINANCE & INSURANCE

OVERVIEW

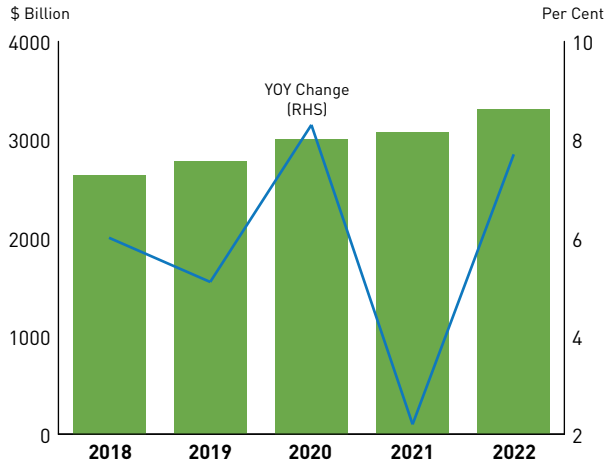
The finance & insurance sector contracted by 0.3 per cent year-on-year in the fourth quarter of 2022, a reversal from the 0.5 per cent expansion in the previous quarter.

For the whole of 2022, the sector expanded by 1.4 per cent, moderating from the 8.3 per cent growth in the preceding year.

COMMERCIAL BANKS

In 2022, total assets/liabilities of commercial banks increased by 7.7 per cent to $3.3 trillion (Exhibit 6.19).

Exhibit 6.19: Total Assets/Liabilities of Commercial Banks



On the assets side, domestic interbank lending rose by $3.4 billion (2.0 per cent). However, domestic credit extended to non-bank customers fell by $34.8 billion (-2.6 per cent), with total loans and advances to residents contracting by 0.3 per cent.

Exhibit 6.20: Growth of Commercial Bank Loans and Advances to Residents by Industry in 2022

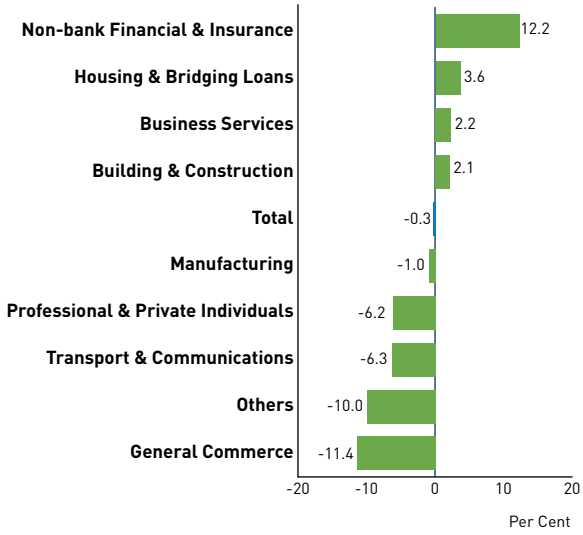
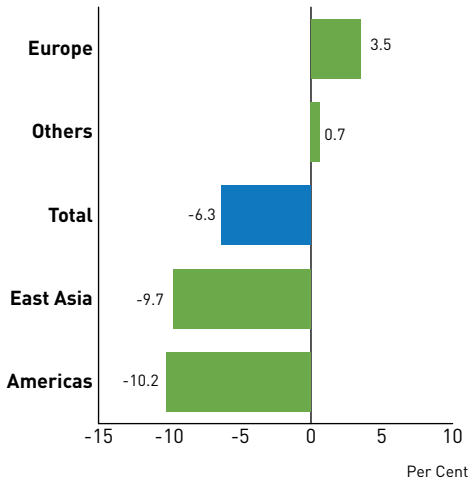


Exhibit 6.21: Growth of Commercial Bank Loans and Advances to Non-Residents by Region in 2022



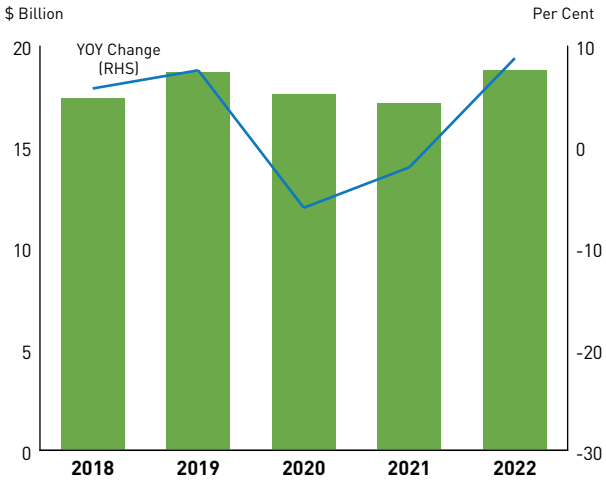
Business lending shrank by 0.8 per cent, weighed down mainly by a decline in loans to the general commerce and transport & communications sectors, although this was partially offset by resilient demand for loans from the non-bank financial & insurance and business services sectors (Exhibit 6.20). In comparison, consumer lending expanded by 0.6 per cent. Growth in this segment was mainly attributed to a pickup in housing & bridging loans, even as car loans and share financing weakened. Meanwhile, loans to non-residents contracted by 6.3 per cent, with East Asia and the Americas contributing the most to the decline (Exhibit 6.21).

On the liabilities front, the total deposits of non-bank customers grew by 7.3 per cent in 2022. As of end-2022, total non-bank deposits amounted to $1.7 trillion, higher than the $1.6 trillion in the year before, mainly driven by a 70.7 per cent increase in fixed deposits.

FINANCE COMPANIES

Total assets/liabilities of finance companies grew by 8.8 per cent in 2022 to $18.8 billion, a reversal from the 2.0 per cent contraction in 2021 (Exhibit 6.22).

Exhibit 6.22: Total Assets/Liabilities of Finance Companies



Non-bank lending expanded by 8.5 per cent in 2022, in contrast to the 1.1 per cent decline in the previous year, as housing loans and hire purchase finance recorded firm growth (Exhibit 6.23). Meanwhile, deposits of non-bank customers also rose by 10.8 per cent in 2022, turning around from the 2.7 per cent contraction in 2021.

Exhibit 6.23: Growth of Loans and Advances of Finance Companies in 2022

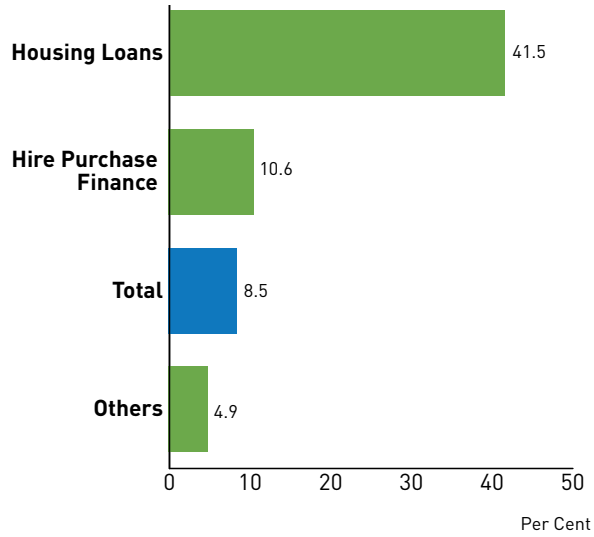
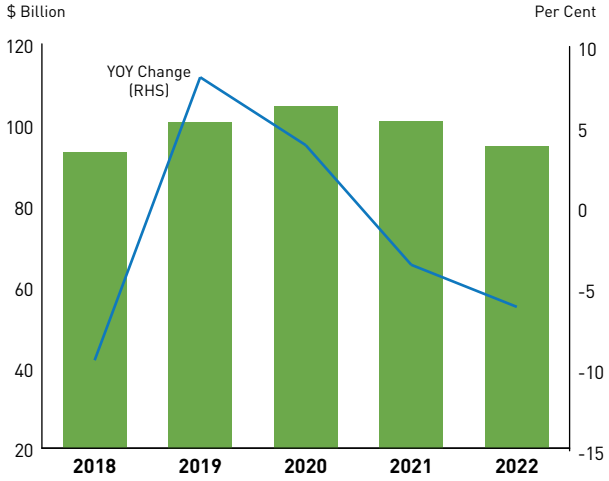


Exhibit 6.24: Total Assets/Liabilities of Merchant Banks



MERCHANT BANKS

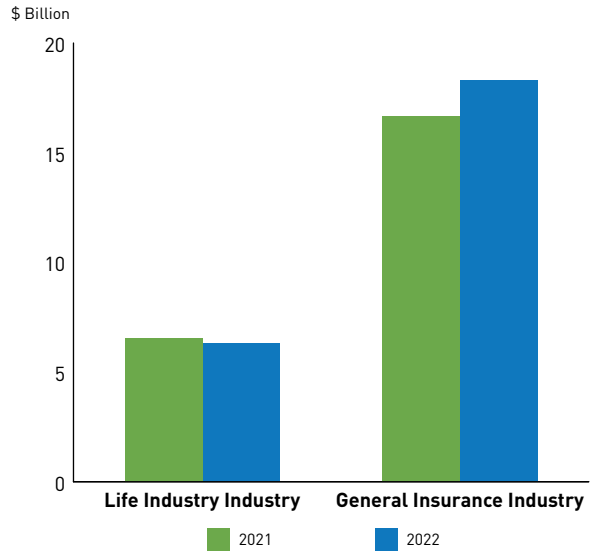
Total assets/liabilities of merchant banks shrank by 6.1 per cent to $94.7 billion in 2022, extending the 3.5 per cent decline in the previous year (Exhibit 6.24). The contraction stemmed from a decline in loans & advances to non-bank customers and interbank lending.

INSURANCE INDUSTRY

Total weighted new business premiums in the direct life insurance industry fell by 4.1 per cent to $6.3 billion in 2022 (Exhibit 6.25). Single premium business declined by 9.4 per cent to $23.5 billion, while regular premium business decreased by 0.6 per cent to $3.9 billion. Overall, the net income of the direct life insurance industry contracted significantly from $1.6 billion in 2021 to -$1.5 billion in 2022, largely due to a fall in investment income.

In the general insurance industry, gross premiums increased by 9.7 per cent to $18.3 billion in 2022, with offshore and domestic businesses accounting for $12.9 billion and $5.4 billion respectively. The general insurance industry recorded an operating profit of $0.5 billion in 2022, down from the $1.2 billion in the previous year, largely due to poorer investment income.

Exhibit 6.25: Premiums in the Insurance Industry

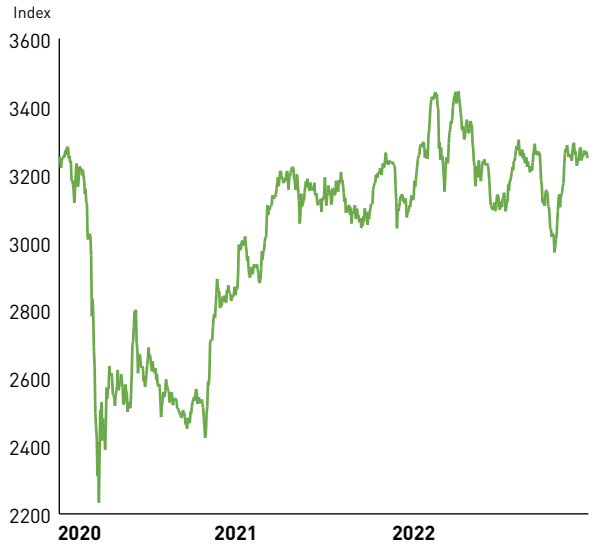


STOCK MARKET

The benchmark Straits Times Index (STI) built on its recovery from end-2021 into early 2022, alongside the pickup in economic activity. However, the onset of the Russia-Ukraine war in late February dented its growth momentum. Thereafter, the attendant rise in global inflation prompted central banks to tighten financial conditions aggressively, which led to the repricing of financial assets. The ensuing market volatility led to a fall in risk sentiment and the STI reached a nadir in late October.

The STI saw an uptick in the last two months of the year as global inflation started to show signs of peaking. Overall, the STI grew by 4.1 per cent in 2022 (Exhibit 6.26), supported by equities in the banking and travel-related sectors. The former benefitted from the higher interest rate environment, while the latter was buoyed by the ongoing recovery in tourism flows.

Exhibit 6.26: Straits Times Index



SECURITIES MARKET

In 2022, the total turnover value of the securities market shrank by 6.2 per cent to $308 billion, and total turnover volume fell by 26.0 per cent to 354 billion shares, compared with 2021. This translated to a 5.0 per cent fall in the average daily traded value to $1.2 billion, and a 25.1 per cent contraction in the average daily traded volume to 1.4 billion shares.

At the end of 2022, the total number of listed companies in Singapore was 651, with a combined market capitalisation of $830 billion, which was 7.5 per cent lower compared to 2021. Of these listed companies, 439 were listed on SGX's Mainboard, while the other 212 were listed on SGX's Catalist.

DERIVATIVES MARKET

In 2022, SGX's derivatives market activity grew by 12.2 per cent to 260 million contracts. Compared to 2021, total futures trading volume increased by 12.3 per cent to 250 million, while options on futures trading volume rose by 9.4 per cent to 10.2 million contracts. The most actively-traded contracts in 2022 were the FTSE China A50 Index Futures, the SGX Nifty 50 Index Futures and the FTSE Taiwan Index Futures, which formed 57.9 per cent of the total volume traded on SGX's derivatives trading platform.

FOREIGN EXCHANGE MARKET

In 2022, the US dollar strengthened against the Euro, Japanese Yen and British Pound by 5.2 per cent, 12.1 per cent and 10.4 per cent respectively, as the Federal Reserve embarked on the fastest pace of rate hikes since the Volcker era to curb inflationary pressures. The US dollar rally unfolded in two phases: after rallying in the first three quarters of 2022, the US dollar reversed part of its gains in the last quarter of 2022 as declines in US headline inflation prompted the Federal Reserve to slow its pace of rate hikes. Relative to the Euro and British Pound, the Japanese Yen weakened on the Bank of Japan's decision to keep its policy rate unchanged at negative levels, even as the European Central Bank and Bank of England joined the Federal Reserve in raising policy rates.

Chapter 6.10

REAL ESTATE & PROFESSIONAL SERVICES

OVERVIEW

The real estate sector expanded by 15.2 per cent year-on-year in the fourth quarter of 2022, extending the 14.8 per cent growth in the previous quarter. For the whole of 2022, the sector grew by 14.1 per cent, moderating from the 18.4 per cent growth in 2021.

The professional services sector expanded by 6.1 per cent year-on-year in the fourth quarter of 2022, extending the 7.9 per cent growth in the previous quarter. For 2022 as a whole, the sector grew by 7.6 per cent, faster than the 4.0 per cent growth in 2021.

REAL ESTATE

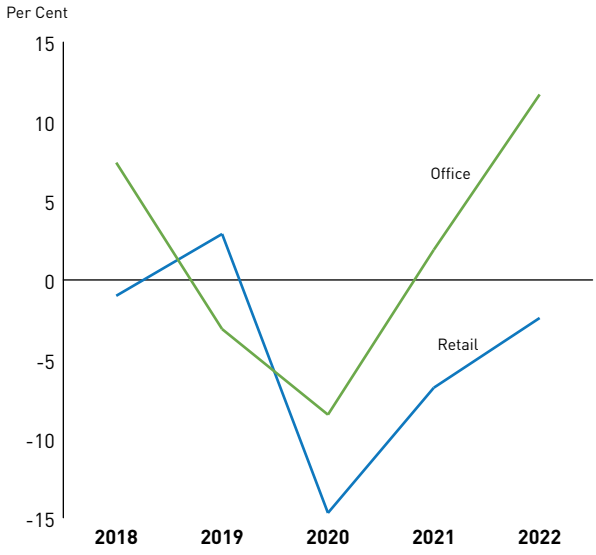
The private residential property market softened in the fourth quarter, as total private residential property sales fell by 54.7 per cent year-on-year, extending the 32.3 per cent decline in the previous quarter. For the full year, total sales fell by 34.8 per cent to 21,890 units, from the 33,557 units sold in 2021.

Reflecting the weaker demand, the increase in private residential property prices tapered off in the fourth quarter, coming in at 0.4 per cent compared to the 3.8 per cent increase in the preceding quarter. For the whole of 2022, prices climbed by 8.6 per cent, following the increase of 10.6 per cent in 2021 (Exhibit 6.27).

Exhibit 6.27: Total Sales of Private Residential Units and Private Residential Property Price Index

In the commercial space segment, the performance of the retail space market remained weak in 2022. Specifically, private retail space rental fell by 2.4 per cent in 2022, although this was an improvement from the 6.8 per cent decline in the previous year (Exhibit 6.28). The weak rental performance was due to lower rentals in the Central Area (-2.1 per cent) and Fringe Area (-3.1 per cent). Similarly, the prices of private retail space declined by 7.8 per cent in 2022, extending the 4.2 per cent fall recorded in 2021. While prices in the Central Area dropped by 11.3 per cent, prices in the Fringe Area rose by 1.0 per cent.

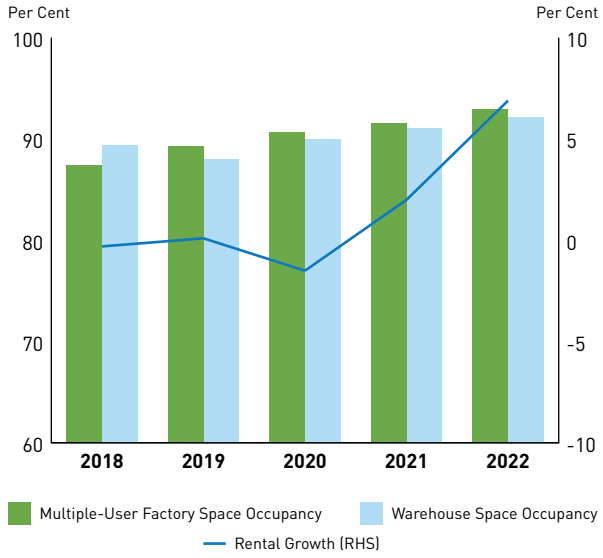
Exhibit 6.28: Changes in Rentals of Private Sector Office and Retail Spaces



On the other hand, the office space market improved in 2022. Office rental rose by 11.7 per cent, accelerating from the 1.9 per cent increase in the previous year, on account of higher rentals in the Central Area (11.9 per cent) and Fringe Area (11.6 per cent). Prices in the office space market inched down by 0.1 per cent in 2022, moderating from the 5.8 per cent decline in 2021.

In the industrial space market, overall rental rose by 6.9 per cent in 2022, faster than the 2.0 per cent increase seen in the previous year (Exhibit 6.29). Rentals of all types of industrial property space (i.e., single-use factories, multiple-user factories, warehouses and business parks) increased in 2022. Meanwhile, overall industrial property prices grew by 7.5 per cent, accelerating from the 4.4 per cent increase in 2021.

Exhibit 6.29: Occupancy Rate and Rental Growth of Industrial Space



PROFESSIONAL SERVICES

In 2022, the professional services sector expanded, with all segments registering growth except for the legal and head offices & business representative offices segments. Growth in the sector was largely driven by the architectural & engineering, technical testing & analysis segment, as well as the other professional scientific & technical services segment, which expanded by 16.9 per cent and 16.8 per cent respectively.

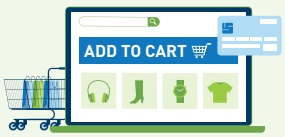
Box Article 6.1

TRENDS IN THE RECOVERY OF RETAIL AND FOOD & BEVERAGE SPENDING IN SINGAPORE

OVERVIEW

The onset of the COVID-19 pandemic in 2020 severely disrupted firms in the Retail and Food & Beverage (F&B) sectors in Singapore, as COVID-19 restrictions, such as safe distancing measures and the closure of physical workplace premises during the Circuit Breaker, caused customer footfall to plummet, while border restrictions led tourist arrivals to come to a standstill. At the same time, the COVID-19 pandemic also accelerated secular trends such as the shift towards hybrid work arrangements and online spending. Using data from internal government sources and a payment provider network, this study examines the trends in Retail and F&B spending during and subsequent to the COVID pandemic.

FINDINGS



Breakdown of spending by geographies: Spending dipped more severely in downtown areas relative to heartland areas during periods of COVID-19 restrictions. Since then, the recovery in spending in heartland areas has been stronger than that in downtown areas for F&B spending, while the converse is true for retail spending.

Shift of spending to online channels: Proportion of online spending in both Retail and F&B surged during periods of COVID-19 restrictions. Subsequently, with the progressive easing of COVID-19 restrictions, these proportions of online spending fell to levels that were lower than the peaks seen at the height of the pandemic during the Circuit Breaker period, but still higher than the levels seen before the pandemic in January 2020.

POLICY TAKEAWAY

Having emerged from the COVID-19 pandemic after more than two years, retail and F&B spending have rebounded strongly. At the same time, there are also signs of a structural shift towards online spending, and a redistribution of F&B spending share towards the heartlands. While global macroeconomic uncertainties may dampen consumer sentiments in the near term, the prospects for Singapore's retail and F&B sectors remain positive given the continued recovery in tourism demand, resilient labour market conditions and the Government's continued commitment to upgrading the capabilities of our firms and workers in these sectors.

BOX 6.1: TRENDS IN THE RECOVERY OF RETAIL AND FOOD & BEVERAGE SPENDING IN SINGAPORE

The onset of the COVID-19 pandemic in 2020 severely disrupted firms in the Retail and Food & Beverage (F&B) sectors in Singapore, as COVID-19 restrictions, such as safe distancing measures and the closure of physical workplace premises during the Circuit Breaker, caused customer footfall to plummet, while border restrictions led tourist arrivals to come to a standstill. At the same time, the COVID-19 pandemic also accelerated secular trends such as the shift towards hybrid work arrangements and online spending. This box article examines how spending in the Retail and F&B sectors were affected by the pandemic, and their subsequent recovery paths.

The analysis in this article draws on two data sources. The first data source is the Retail Sales Index (RSI) and Food & Beverage Services Index (FBSI) compiled by the Department of Statistics (DOS). These indices are compiled on a monthly basis, through surveys of firms, to measure changes in retail and F&B sales respectively[1].

The second data source is spending indices for both sectors[2] from a payment provider network with a substantial market share in Singapore. These spending indices confer two benefits over the RSI and FBSI. First, they allow us to assess distinct spending trends by geographies across Singapore. Second, they come at a daily frequency, and are hence able to track the impact of changes in COVID-19 restrictions more responsively.

Topline Spending Trends in the Retail and Food & Beverage Sectors

Singapore confirmed its first local case of COVID-19 on 23 January 2020, and subsequently declared a state of DORSCON Orange on 7 February 2020. This led to a fall in retail and F&B spending, as could be seen from both the spending indices from the payment provider, as well as DOS's RSI and FBSI (Exhibit 1). In particular, data from the payment provider indicated that retail and F&B spending fell to 83.2 per cent[3] and 82.4 per cent of January 2020 levels[4] respectively by end-February 2020.

Subsequently, during the Circuit Breaker[5], which stretched from 7 April to 2 June 2020, retail and F&B spending plummeted to a low of 70.3 per cent and 17.9 per cent of January 2020 levels respectively. The relative resilience of retail spending compared to F&B spending could be partly because consumers were substituting from dining-in at F&B establishments to food purchases at supermarkets and hypermarkets. Purchases of electronic and home furnishing also picked up during this period because of work-from-home and home-based learning requirements.

Since the end of the Circuit Breaker, both retail and F&B spending have generally been on an upward trend, with spikes during the 2020 and 2021 year-end holiday seasons, and dips when COVID-19 restrictions were tightened, such as when Singapore entered into Phase 2 Heightened Alert[6] on 16 May 2021 and again on 22 July 2021. A notable divergence in the trends between the two could be seen from May to June 2021, and from July to August 2021, when F&B spending dropped significantly from around 130 per cent (in May and July 2021) to around 60 per cent (in June and August 2021) of January 2020 levels, whereas retail spending remained relatively unaffected. The relative resilience of retail spending could again be due to spending in supermarkets and hypermarkets during periods of tightened restrictions. As of 30 November 2022, retail and F&B spending had recovered to 164 per cent and 125 per cent of January 2020 levels respectively.

1 *For more details on the RSI and FBSI methodology, see DOS's information paper "Re-basing of the Retail Sales and Food & Beverage Services Indices (2017 = 100)". The two indices are presented by DOS in both current and constant prices, with the latter removing price effects to measure the changes in real economic activity.*

2 *For the data provided by the payment provider network, spending in the Retail sector comprises eight categories: Wearing Apparel & Footwear, Petrol Service Stations, Department Stores, Medical Goods & Toiletries, Computer & Telecommunications Equipment, Supermarkets & Hypermarkets, Furniture & Household Equipment, and Watches & Jewellery. There is only one category of spending in the F&B sector.*

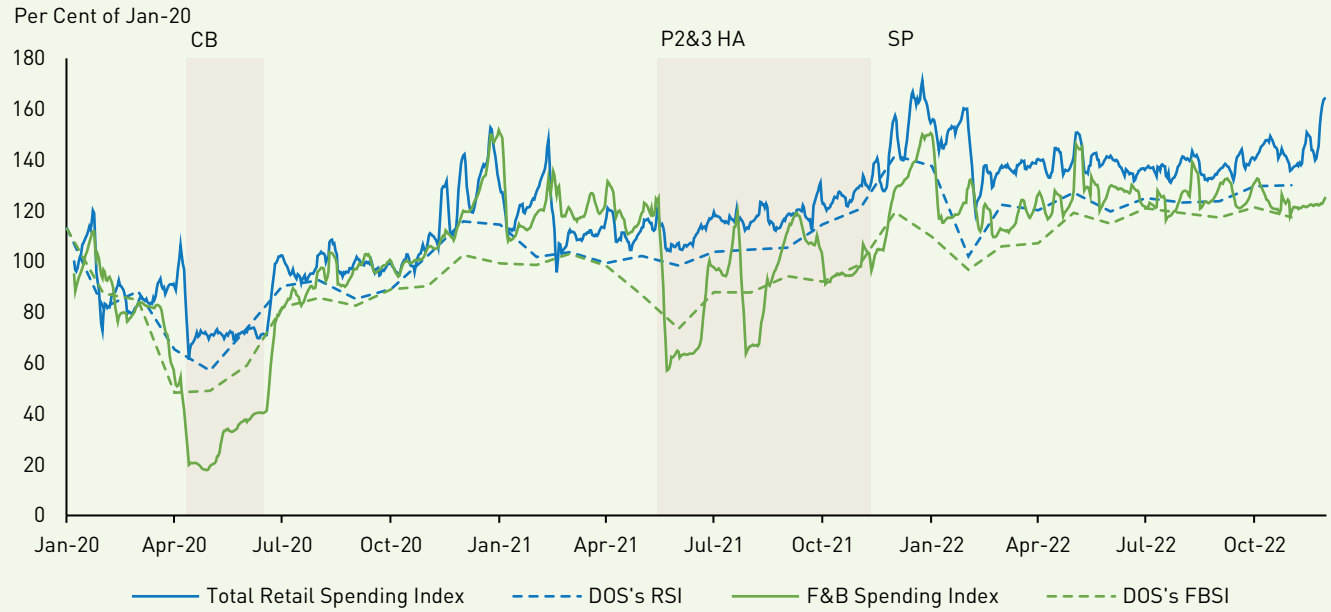
3 *Index points for the data provided by the payment provider network are percentage-points of average day-of-week spending in January 2020, i.e., 100 index points = average day-of-week spending in January 2020.*

4 *Data from the payment provider network goes back only to 1 January 2020. As such, we use January 2020 levels as our pre-COVID comparison; such comparisons may include seasonal effects.*

5 *During the Circuit Breaker, most physical workplace premises were closed, except for those providing essential services and in selected economic sectors of critical importance, while schools moved to full home-based learning, so as to significantly reduce movements and interactions in public and private places.*

6 *During Phase 2 (Heightened Alert), dining-in at F&B establishments was prohibited, the group size for social gatherings was tightened, and work-from-home was reinstated as the default working arrangement.*

Exhibit 1: Spending in Retail and Food & Beverage Sectors (Per Cent of January 2020 levels)



Notes: Solid lines plot the 7-day moving averages of the indices of nominal spending at Singapore-based merchants, obtained from a payment provider network. Dashed lines plot the monthly non-seasonally-adjusted RSI or FBSI series (current prices) obtained from DOS. Blue lines represent retail spending and red lines represent F&B spending. The baseline of 100 represents average day-of-week spending in January 2020. CB stands for Circuit Breaker, P2&3 HA stands for Phase 2 and 3 Heightened Alert, and SP stands for Stabilisation Phase.

Underlying these topline trends are variations by geographical regions and online versus in-person spending. The next two sections describe these in greater detail.

Breakdown of Spending Trends by Geographical Regions[7]

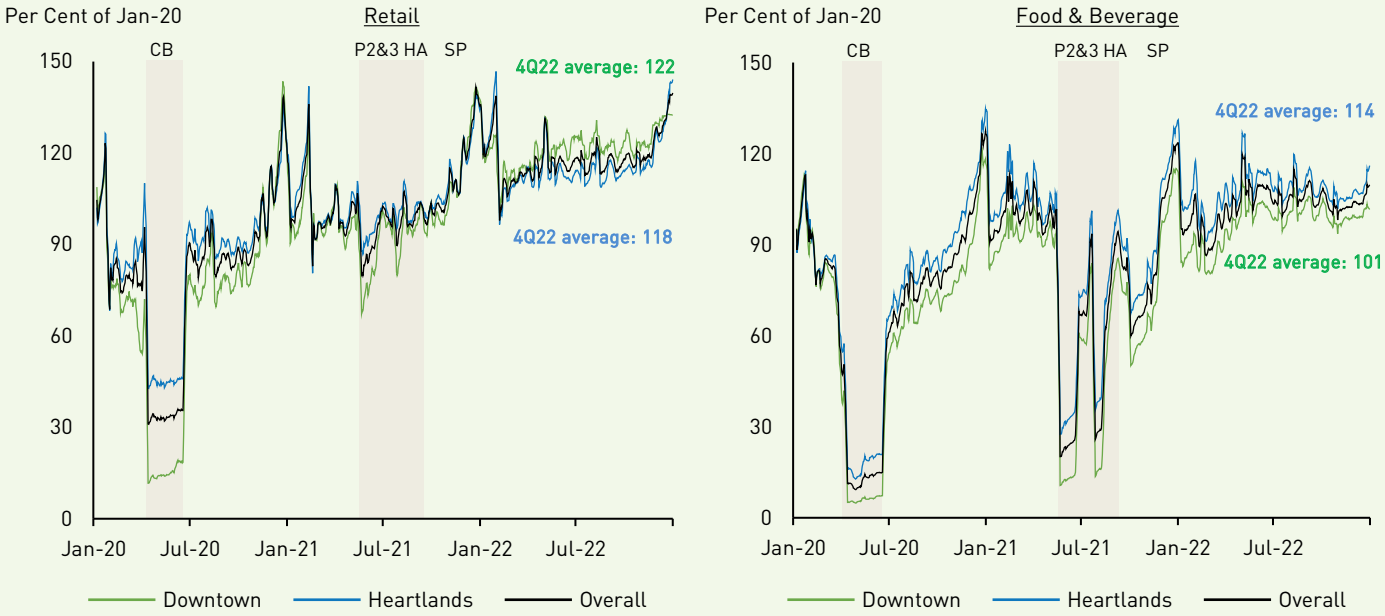
The pandemic has led to a redistribution of spending share across geographical regions in Singapore, likely driven by work-from-home arrangements that dominated work practices at the height of the pandemic, and remain prevalent even after the transition to the Stabilisation Phase on 21 November 2021.

As can be seen from Exhibits 2a and 2b, for the most part of the pandemic, and especially during the Circuit Breaker and Heightened Alert periods, retail and F&B spending fell by more (relative to their respective January 2020 levels) in downtown areas than in heartland areas. This could be attributed in large part to COVID-19 restrictions such as work-from-home requirements. Although retail and F&B spending in both downtown and heartland areas have generally been on a path of recovery since the transition to Stabilisation Phase, the recovery in spending in heartland areas has been stronger than that in downtown areas for F&B spending, while the converse is true for retail spending. These trends suggest that there has been a redistribution of F&B spending share towards the heartlands, likely due to the prevalence of hybrid work arrangements even after the easing of work-from-home measures. This is, however, not seen for retail spending, possibly because of the quality and diversity of retail experience in the downtown areas compared to the heartland areas.

These observations are similar to findings from studies by Barrero et al. (2021) and De Fraja et al. (2021) in the United States and United Kingdom respectively, both of which concluded that work-from-home policies arising from the pandemic drew F&B spending out of major city centres towards residential neighbourhoods.

7 *The focus of this section is on in-person spending trends, as online spending cannot by disaggregated by geographical regions.*

Exhibit 2a and 2b: Spending in Retail and Food & Beverage Sectors by Regions (Per Cent of January 2020 levels)



Notes: Graphs plot the 7-day moving averages of indices of nominal spending at Singapore-based merchants, obtained from a payment provider network. The baseline of 100 represents the average day-of-week spending in January 2020. CB stands for Circuit Breaker, P2&3 HA stands for Phase 2 and 3 Heightened Alert, and SP stands for Stabilisation Phase.

Shift of Spending to Online Channels

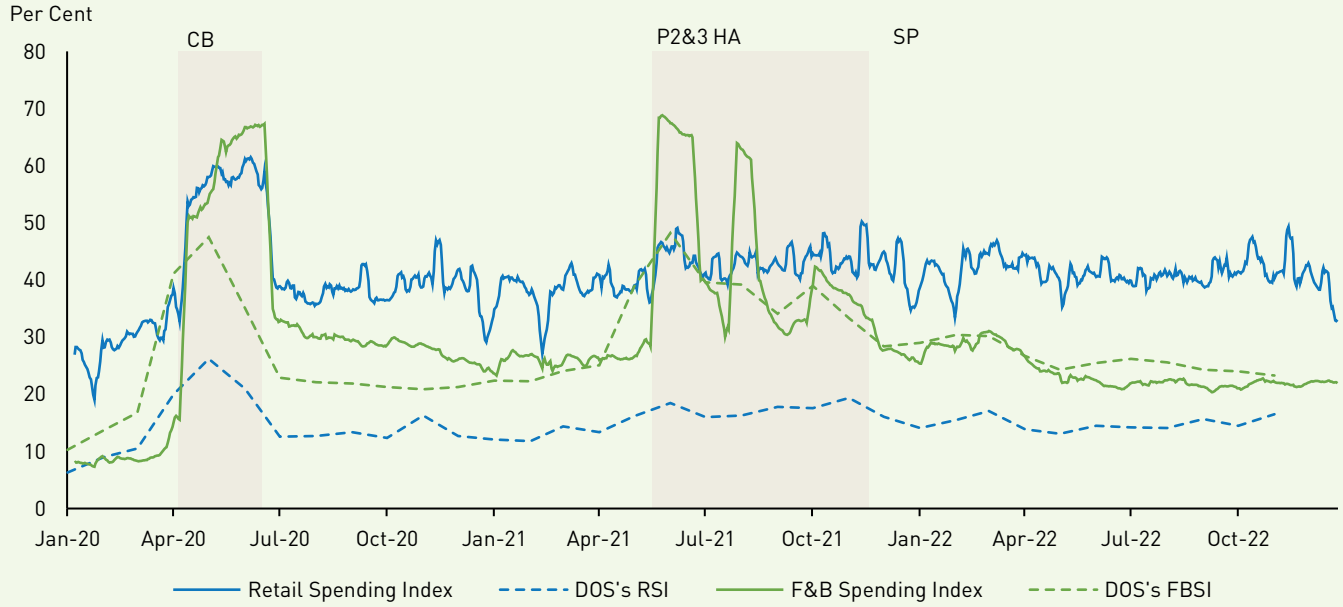
The pandemic has also led to a substantial shift in spending from physical to online channels, when compared to pre-pandemic trends (January 2020).

Notably, the proportion of online spending surged from pre-pandemic levels (January 2020) of 30 per cent for online retail spending and 10 per cent for online F&B spending[8], to a high of 60-70 per cent during the Circuit Breaker period (Exhibit 3). A similar surge occurred for online F&B spending in particular during the Heightened Alert periods. With the progressive easing of COVID-19 restrictions, the share of online spending had fallen to 40 per cent for retail spending and 20 per cent for F&B spending by May 2022. While these levels were lower than the peaks seen at the height of the pandemic during the Circuit Breaker period, they were still higher than the proportions of online spending seen in the respective sectors before the pandemic in January 2020.

This observation is not unique to Singapore, as other countries such as New Zealand, United Kingdom and Australia also recorded marked increases in their online spending proportions[9] both during and after the pandemic. In Singapore, the higher online spending proportion is also likely to have been supported by the Government's effort to encourage more Retail and F&B businesses to go online through programmes such as the Digital Resilience Bonus.

8 Online F&B spending refers to the purchase of F&B through a food delivery platform (e.g., Grab, Foodpanda, Deliveroo) or the F&B businesses' websites or apps.
9 Survey of global consumer spending by Alcedo et al. 2022

Exhibit 3: Online Proportions of Spending in Retail and Food & Beverage Sectors (Per Cent)



Notes: Solid lines plot the 7-day moving averages of the daily proportions of online spending at Singapore-based merchants, obtained from a payment provider network. Dashed lines plot the monthly online proportion of spending, obtained from DOS. Blue lines represent retail spending and red lines represent F&B spending. CB stands for Circuit Breaker, P2&3 HA stands for Phase 2 and 3 Heightened Alert, and SP stands for Stabilisation Phase.

Conclusion

Having emerged from the COVID-19 pandemic after more than two years, retail and F&B spending have rebounded strongly, as can be seen from DOS's RSI and FBSI, as well as newer spending indices derived from data from a payment provider network. At the same time, there are also signs of a structural shift towards online spending, and a redistribution of F&B spending share towards the heartlands.

The continued recovery of retail and F&B spending in the months ahead will be further supported by various initiatives by the Government to improve the capabilities of Retail and F&B firms and expand their customer base. For example, Enterprise Singapore is working with local merchants, through the Food Services and Retail Business Revitalisation Package and Our Heartlands 2025 initiative, to attract more consumers into the heartlands. It is also deepening its efforts to build digitalisation capabilities and enhance productivity among firms in the sectors.

While global macroeconomic uncertainties may dampen consumer sentiments in the near term, the prospects for Singapore's retail and F&B sectors remain positive given the continued recovery in tourism demand, resilient labour market conditions and the Government's continued commitment to upgrading the capabilities of our firms and workers in these sectors.

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CHAPTER

7

ECONOMIC OUTLOOK

Chapter 7

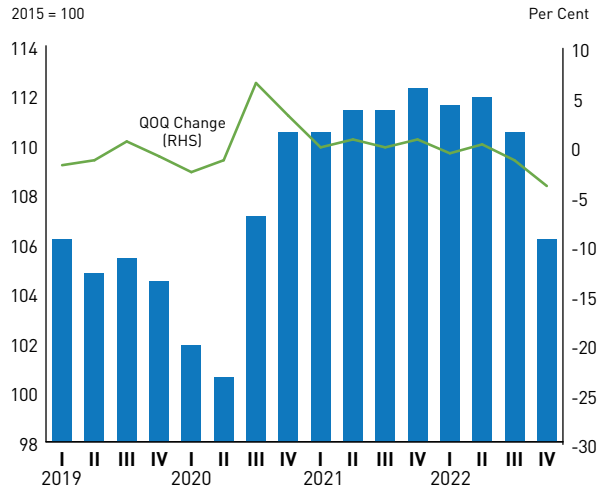
ECONOMIC OUTLOOK

LEADING INDICATORS

The composite leading index (CLI) for Singapore declined by 3.9 per cent on a quarter-on-quarter basis in the fourth quarter of 2022, pointing to a weaker outlook for the Singapore economy in the near term (Exhibit 7.1).

Of the nine components of the CLI, seven of them decreased on a quarter-on-quarter basis in the fourth quarter, namely non-oil sea cargo handled, stock price, non-oil retained imports, money supply, US Purchasing Managers' Index, stock of finished goods and domestic liquidity. By contrast, the other two components – wholesale trade and new companies formed – rose compared to a quarter ago.

Exhibit 7.1: Composite Leading Index Levels and Growth Rate



OUTLOOK FOR 2023

Since the Economic Survey of Singapore in November 2022, Singapore's external demand outlook has improved slightly. Growth in China is projected to pick up in tandem with the faster-than-expected easing of its COVID-19 restrictions. This has led to improvements in the growth outlook of regional economies. At the same time, the global supply situation continues to stabilise amidst softening global demand conditions. Accordingly, global commodity prices have eased from 2022 levels, although they remain elevated with the ongoing Russia-Ukraine war.

In the US, growth is projected to decelerate as tight financial conditions on the back of monetary policy tightening are expected to weigh on personal consumption and investment. Similarly, notwithstanding improvements in its energy situation, GDP growth in the Eurozone is forecast to slow as tighter monetary policy on account of elevated core inflation is likely to dampen domestic demand.

In Asia, China's growth is expected to pick up following the lifting of its COVID-19 restrictions, although continued stresses in its property market and weakening global demand are likely to weigh on its recovery. Meanwhile, despite weaker external demand for their merchandise goods and commodities, GDP growth in key Southeast Asian economies such as Malaysia, Indonesia and Thailand is likely to be supported by a continued recovery in domestic and tourism demand.

At the same time, uncertainties in the global economy remain. First, tighter financial conditions across many advanced economies that have been raising interest rates could have a larger-than-expected impact on global growth. With major central banks still raising interest rates, disorderly market adjustments and the exposure of latent vulnerabilities among highly-indebted corporates and households could increase financial stability risks. Second, further escalations in the war in Ukraine and geopolitical tensions among major global powers could worsen supply disruptions, dampen consumer and business confidence, as well as weigh on global trade.

Against this backdrop, the growth outlook for aviation- and tourism-related sectors of the Singapore economy has improved, as the recovery in international air travel and inbound tourism is expected to accelerate following the faster-than-expected relaxation of China's border restrictions. These sectors include air transport, accommodation and arts, entertainment & recreation. The output of the aerospace segment within the transport engineering cluster is also expected to be bolstered by the improved outlook for air travel.

On the other hand, the growth outlook for other outward-oriented sectors remains weak given the broader slowdown in the global economy. For instance, the semiconductors segment of the electronics cluster is expected to be negatively affected by weaker global semiconductor demand, while the precision engineering cluster is projected to be weighed down by a cutback in capital spending by semiconductor manufacturers. At the same time, growth in the wholesale trade, water transport and finance & insurance sectors will be dampened by the slowdown in major external economies.

Taking into account the global and domestic economic environment, the GDP growth forecast for 2023 is maintained at **"0.5 to 2.5 per cent"**.

FEATURE ARTICLE

IMPACT OF THE JOBS GROWTH INCENTIVE (JGI) SCHEME ON FIRM-LEVEL LOCAL LABOUR OUTCOMES

HSBC

Feature Article

IMPACT OF THE JOBS GROWTH INCENTIVE (JGI) SCHEME ON FIRM-LEVEL LOCAL LABOUR OUTCOMES

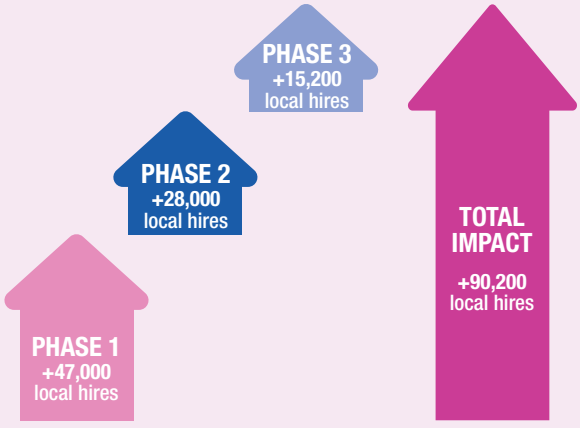
OVERVIEW

As the economy began to recover from the pandemic-induced recession, the JGI scheme was introduced to support job creation through the use of wage support to encourage firms to bring forward the hiring of local workers.

FINDINGS

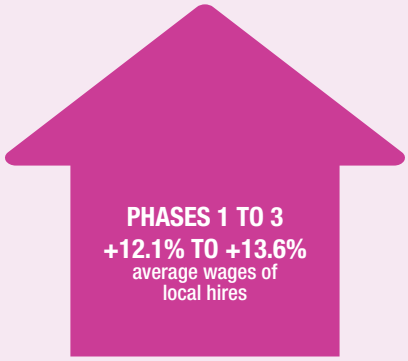
Finding 1:

The JGI scheme was associated with an increase in local gross hires, although the impact waned over the three phases. Compared to their respective control groups, JGI-supported firms hired 47,000, 28,000 and 15,200 more local workers in Phases 1, 2 and 3 respectively. These estimates translate into a cumulative increase of about 90,200 local hires for the period of September 2020 to February 2022.



Finding 2:

The JGI scheme was also associated with an increase in the average wages of local gross hires. Compared to the respective control groups, the average wages of local hires in JGI-supported firms were 12.1% to 13.6% higher during the first three phases of the JGI scheme.



POLICY TAKEAWAY

Given that the JGI is an exceptional scheme designed to support labour market recovery during crisis, its positive effects on supporting local hires were the strongest as the economy was emerging from the recession and when labour market slack was the most severe. The JGI is assessed to have achieved its objectives with the labour market having largely recovered to pre-pandemic levels.

EXECUTIVE SUMMARY

- In 2020, the onset of the COVID-19 pandemic caused the Singapore economy to plunge into its worst recession since independence. To cushion firms and workers from the impact of the recession, the Government provided broad-based cost relief to firms. However, as the economy began to recover from the recession, government support measures started to tilt from providing cost relief to supporting the labour market recovery. Against this backdrop, the Jobs Growth Incentive (JGI) scheme was introduced to support job creation through the use of wage support to encourage firms to bring forward the hiring of local workers. This study evaluates the effectiveness of JGI Phases 1 to 3 in supporting local employment outcomes.

- Our findings suggest that JGI Phases 1 to 3 were successful in encouraging firms to expand their local workforce, which in turn supported the labour market recovery. Between September 2020 and February 2022, the JGI scheme was associated with an increase of about 90,200 local hires cumulatively. At the same time, local hires also benefitted from wages that were 12.1 per cent to 13.6 per cent higher on average. Furthermore, there was evidence that in Phase 1, the scheme supported a modest increase in the hiring of mature workers.

- Given that the JGI is an exceptional scheme designed to support labour market recovery during a crisis, its positive effects on supporting local hires were the strongest as the economy was emerging from the pandemic-induced recession and when labour market slack was the most severe. As the economic recovery gained momentum and labour market slack dissipated, the positive effect on local gross hires expectedly waned. The JGI is assessed to have achieved its objectives with the labour market having largely recovered to pre-pandemic (2019) levels[1] by 4Q2022.

The views expressed in this paper are solely those of the authors and do not necessarily reflect those of the Ministry of Manpower (MOM), Ministry of Finance (MOF), Ministry of Trade and Industry (MTI) or the Government of Singapore.[2]

INTRODUCTION

In 2020, the onset of the COVID-19 pandemic caused the Singapore economy to plunge into its worst recession since independence. To help firms and workers cope with the economic shock, the Government provided broad-based cost relief to firms. In particular, to safeguard the livelihoods of local workers, the Government implemented the Jobs Support Scheme (JSS) which provided wage subsidies to employers to help them retain their local employees. This helped to stabilise the labour market and mitigate the adverse impact on local employment and wages [Pang, Zhou & Lee, 2022]. Nevertheless, given the severity of the economic downturn, the labour market still experienced negative spillover effects as the resident unemployment rate rose above pre-pandemic levels and hiring sentiments weakened.

In the second half of 2020, as COVID-19 infections were brought under control following the Circuit Breaker, economic activities slowly resumed with a careful and calibrated easing of domestic and travel restrictions. In tandem with the recovery in economic activity, government support measures for firms began to pivot from providing cost relief to supporting a labour market recovery. Against this backdrop, as the JSS support was gradually tapered, a new hiring scheme – the Jobs Growth Incentive (JGI) – was introduced in September 2020 to encourage firms to bring forward their hiring plans and expand their local workforce. The first phase of the JGI scheme provided support to eligible firms who hired locals between September 2020 and February 2021. Since then, the scheme has been extended successively, with a total of five phases to-date (the latest Phase 5 is from October 2022 to March 2023). This study focuses on the impact of the first three phases of the JGI scheme based on data availability at the time of the analyses.

1 *As at December 2022, total employment surpassed pre-pandemic levels by 3 per cent whereas the resident unemployment rate, at 2.8 per cent, was below the pre-pandemic average resident unemployment rate of 3.0 per cent.*

2 *We would like to thank Ms Yong Yik Wei, Mr Kenny Tan, Dr Yip Chun Seng, Mr Tan Kok Kong, Ms Jamie Poh, Mr Alphonsus Gomez and Mr Lee Zen Wea for their useful suggestions and comments. All errors belong to the authors.*

In terms of scheme design, the JGI scheme provided wage support to firms for new local workers hired within a qualifying window. To qualify for the support, firms must have increased both their overall local workforce, and the number of local workers earning gross monthly wages of $1,400 and above, relative to the size of their local workforce in the baseline months [Exhibit 1]. In this way, the JGI only supported firms that expanded their local workforce, which was a more targeted approach as compared to the JSS. In addition, the JGI provided a higher level of wage support for vulnerable workers, who were defined as mature workers (i.e., aged 40 years and above), persons with disabilities (PwDs) and ex-offenders.

Exhibit 1: Scheme Details of JGI Phases 1 to 3

	Phase 1	Phase 2	Phase 3
Qualifying window	New local hires in September 2020 – February 2021 Baseline month: August 2020	New local hires in March 2021 – September 2021 Baseline month: February 2021	New local hires in October 2021 – March 2022 Baseline month: September 2021
Eligibility conditions	1. Increase in overall local workforce relative to baseline month; and 2. Increase in local workforce earning gross monthly wages of $1,400 and above relative to baseline month Employer must be established on or before 16 August 2020	No change to conditions 1 and 2. Baseline month updated to February 2021 Employer must be established on or before 15 February 2021	No change to conditions 1 and 2. Baseline month updated to September 2021 Employer must be established on or before 23 September 2021
Support for non-mature workers	Up to 25% of first $5,000 of wages for 12 months	Up to 25% of first $5,000 of wages for 12 months	Up to 15% of first $5,000 of wages for 6 months
Support for mature workers (aged ≥40), PwDs, ex-offenders	For wages paid in September 2020 – February 2021, up to 50% of first $5,000 of wages; for wages paid from March 2021 onwards, up to 50% of first $6,000 of wages. Support was provided for 18 months.	Up to 50% of first $6,000 of wages for 18 months	Up to 50% of first $6,000 for 12 months

As the resident unemployment rate began to fall in tandem with the economic recovery (i.e., from the pandemic peak of 4.7 per cent in September 2020 to 3.0 per cent in March 2022), the JGI support levels were reduced across the phases to scale down the support in general, even while continuing to maintain higher support levels for vulnerable workers.

This study empirically examines the causal impact of the first three phases of the JGI scheme on the following outcome variables: (a) the number of local gross hires[3], which provides a measure of the effectiveness of the scheme in incentivising the hiring of local workers, (b) the average wages of local gross hires, which is a proxy for the quality of the jobs created for local workers, and (c) the share of local gross hires aged 40 and above, which examines whether the higher level of wage support provided for mature workers was effective in incentivising employers to hire them.[4]

3 Local gross hires refer to the number of newly-employed locals who were not employed with the firm in the preceding month.
4 The findings for JGI Phase 1 were first released in MOF's Paper on "Assessment of the Impact of Key COVID-19 Budget Measures" published in February 2022.

LITERATURE REVIEW

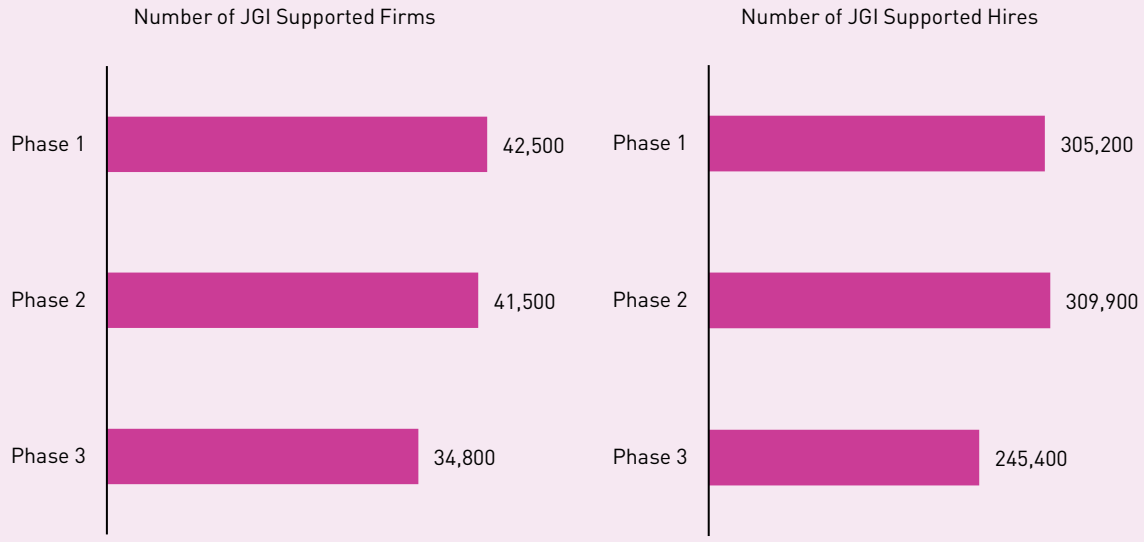
Hiring subsidies are commonly used to provide broad-based support for hiring during a recession as they lower the cost of workers. The literature generally finds that hiring subsidies can improve employment outcomes during economic downturns. For instance, evidence from France and the United States showed that hiring subsidies implemented during and shortly after the 2007-2008 Global Financial Crisis had a strong impact on employment rates [Cahuc et al., 2017; Farooq & Kugler, 2015]. Sjögren and Vikström (2015) also found that an increase in the wage subsidy rate in Sweden in 2009, following the Global Financial Crisis, had a substantial impact on job finding rates, although an increase in the subsidy duration had no effect.

Hiring subsidies are sometimes targeted at specific subgroups of workers, especially those who are more vulnerable, to improve their employment prospects. However, empirical findings on the effectiveness of such subsidies are mixed. Grijalva and Neumark (2013) found that state-level hiring subsidies targeted at unemployed jobseekers in the United States had a large impact on employment, while Desiere and Cockx (2022) concluded that a hiring subsidy targeted at mature workers in Belgium successfully increased the job-finding rates of these workers. On the other hand, Boockmann et al. (2012) found that overall, there was little evidence[5] that hiring subsidies targeted at mature workers in Germany incentivised firms to hire more mature workers.

DATA AND SUMMARY STATISTICS

This study uses monthly administrative data on local employees and foreign work pass holders, as well as JGI payout data, which include data on the number of new local hires. The administrative datasets on local and foreign workers cover the period of June 2020 to February 2022, while the JGI payout data cover the period of September 2020 to February 2022.[6] Over the latter period, around 81,200 unique firms received JGI disbursements for making approximately 860,500 new local hires [Exhibit 2].

Exhibit 2: Number of JGI-Supported Firms^ and Hires, by JGI Phases*



^ These are not unique firm counts as the same firm can be supported in different JGI phases.
* The statistics on JGI-supported firms and hires are for the full six months of Phase 1, the first six months of Phase 2 (out of seven months), and the first five months of Phase 3 (out of six months). These correspond to the time periods for the three phases analysed in this study, which were in turn based on data availability at the point when the analyses were carried out.
Source: MOM.

5 *The study found positive effects for only one sub-group of mature workers with no effect for the rest.*
6 *JGI Phase 1 was implemented in September 2020, but data from June 2020 was used in identifying an appropriate control group for the analysis. While JGI Phase 3 provided support for new local hires made from October 2021 to March 2022, data for March 2022 was unavailable when the analysis was conducted.*

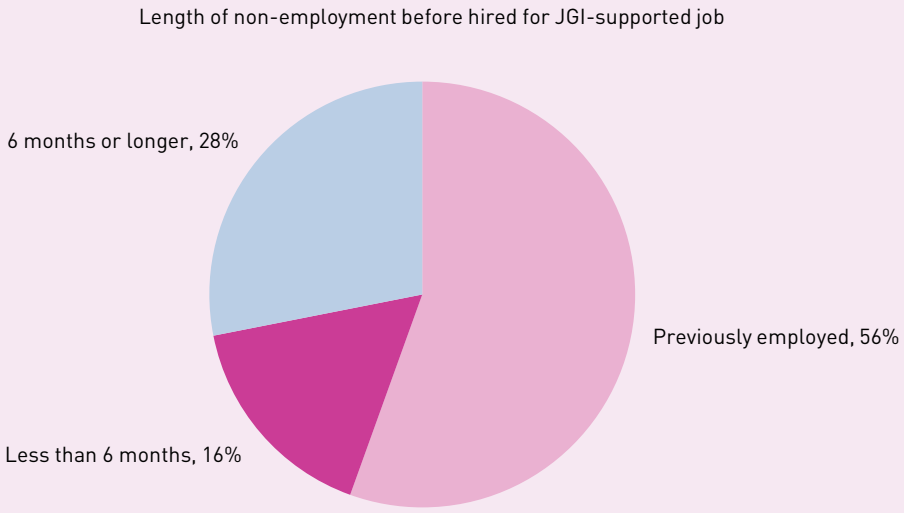
The JGI scheme supported the recovery of sectors adversely affected by the pandemic, such as Food & Beverage Services and Retail Trade, as well as the expansion of growth sectors, such as Professional Services and Information & Communications. These were the sectors with the largest number of JGI-supported hires for Phases 1 to 3 [Exhibit 3].

Exhibit 3: Top 5 Sectors with the Most Number of JGI-Supported Hires for Phases 1 to 3

Source: MOM.

The JGI scheme also supported the hiring of vulnerable jobseekers. Among all JGI-supported hires across Phases 1 to 3, about 45 per cent were previously non-employed[7], with close to 28 per cent having been non-employed for at least six months [Exhibit 4]. Close to half of all JGI-supported hires were mature workers.

Exhibit 4: Distribution of Non-Employment Duration among JGI-Supported Hires for JGI Phases 1 to 3



EMPIRICAL METHODOLOGY

To estimate the causal impact of the JGI scheme on key firm-level local worker outcomes, we compared the outcomes of two groups of firms: a first group that received the JGI subsidy in any given month of the qualifying window (i.e., the "treated" group); and a second group that did not receive the JGI subsidy during the qualifying window (i.e., the "control" group)[8]. The local worker outcomes in the control group would serve as a counterfactual for the treated group, thereby allowing us to estimate the causal impact of the scheme. The analysis was conducted separately for each JGI phase as the scheme parameters differed across the phases.[9]

7 Individuals were defined as non-employed based on CPF administrative records, i.e., if they do not have any CPF contributions paid for him/her by an employer.
8 For example, a firm that hired a local worker during the qualifying window but did not register an increase in its overall local workforce relative to the baseline month would not have received the JGI subsidy.
9 For the analysis of JGI Phases 2 and 3, firms that had received support under the earlier JGI phases were excluded from both the treated and control groups as their employment outcomes could be confounded by continued impact from the earlier JGI phases.

However, across the three phases, the treated firms were observably different from firms in the control group in the three months prior to the qualifying window of the respective JGI phases [Exhibit 5]. A simple comparison of the outcomes of the two groups of firms could therefore be confounded by the underlying differences in these observable characteristics. To improve the comparability of the two groups, we (a) restricted the control group to firms that made at least one local gross hire during the qualifying window but did not meet the other JGI criteria, and (b) ran a matching algorithm known as Coarsened Exact Matching (CEM) based on firms' characteristics in the three months prior to the qualifying window of the respective JGI phases. This allowed us to construct control groups that were observably more similar to the treated firms in terms of their workforce profiles and sectors (henceforth "the matched treated and control groups") for the respective phases.

Exhibit 5: Summary Statistics of Firm Characteristics Before and After Matching

Firm statistics (Average)	Before Matching		After Matching	
	Treated	Control	Treated	Control
Phase 1 (Using data from June 2020 to August 2020)				
Number of local workers	27	9.4	13	14
Average wages of local workers	$3,600	$3,300	$3,200	$3,100
Share of local workers aged 40 and above	63%	70%	74%	72%
Number of local gross hires	1.3	0.35	0.35	0.34
Phase 2 (Using data from December 2020 to February 2021)				
Number of local workers	18	13	9.0	9.7
Average wages of local workers	$4,500	$3,800	$3,600	$3,500
Share of local workers aged 40 and above	67%	67%	76%	76%
Number of local gross hires	0.66	0.61	0.17	0.18
Phase 3 (Using data from July 2021 to September 2021)				
Number of local workers	11	14	6.8	7.2
Average wages of local workers	$3,900	$3,500	$3,300	$3,100
Share of local workers aged 40 and above	74%	67%	81%	80%
Number of local gross hires	0.58	0.64	0.17	0.18

Source: Authors' estimates.

Thereafter, we quantified the impact of the JGI scheme using a difference-in-differences regression model, which estimates the difference between the change in the trends of the matched treated and control groups. Specifically, the following equation was estimated:

$$Y_{it} = \beta_1 + \beta_2 T_i \times D_t + \delta_{st} + \alpha_i + \varepsilon_{it}$$

Where:

- Y_{it} denotes the outcome of interest (i.e., number of local gross hires, log of average wages among local gross hires, share of local gross hires aged 40 and above) for each firm i in time t
- T_i is the treatment dummy (equals to 1 if the firm had received JGI for any given month during the respective qualifying period, 0 otherwise)
- D_t is a monthly time dummy (excluding the baseline month: August 2020 for Phase 1, February 2021 for Phase 2, and September 2021 for Phase 3)
- δ_{st} refers to sector x time fixed effects to control for sector-specific time trends
- α_i refers to firm fixed effects
- ε_{it} refers to the error term

The coefficient of interest is β_2, which measures the average impact of the JGI scheme on firm-level local worker outcomes.

The regression model controls for the influence of broader (non-JGI) macroeconomic and sector-specific trends that are common to both the treated and control groups (e.g., the uneven impact of the COVID-19 pandemic on different sectors). However, the identification strategy may still overestimate the impact of the JGI scheme on local hiring, as this outcome variable is positively correlated with assignment to the treated group. Specifically, as firms would need to register a net increase in their local workforce relative to the baseline month to qualify for JGI, the treated firms are by construct likely to have hired more local workers relative to the control group. Furthermore, as eligible firms are those that hired locals more extensively than firms in the control group, the two groups of firms are likely to be different in unobservable ways, which could bias the estimated impact. Nevertheless, our approach mitigates these biases by (a) examining the impact of JGI on local gross hires instead of local net hires, as the former is not perfectly correlated with the qualifying criteria, and (b) improving the comparability of the two groups by constructing a control group that comprises firms that are more similar to those in the treated group in the ways described earlier.

To ensure the robustness of our findings, we conducted additional checks. For example, we used a different matching method (propensity score matching) and lifted the restriction that control firms needed to have hired at least one local worker. The results from these robustness checks were similar to our main results.

RESULTS

We find that the JGI scheme improved local employment outcomes modestly across all three phases [Exhibit 6].

First, we find that the JGI scheme was associated with an increase in local gross hires, although the impact waned over the three phases. Specifically, compared to their respective control groups, JGI-supported firms hired 0.30, 0.18 and 0.14 more locals per firm per month in Phases 1, 2 and 3 respectively. These estimates translate into a cumulative increase of 47,000 and 28,000 local hires across Phase 1 (six months) and the first six months of Phase 2 respectively, as well as a cumulative increase of 15,200 local hires over the first five months of Phase 3.

Second, we find that the scheme was associated with an increase in the average wages of local gross hires. Compared to the respective control groups, the average wages of local gross hires in JGI-supported firms were 13.3 per cent (which translates to approximately $260), 13.6 per cent (or $330) and 12.1 per cent (or $300) higher in Phases 1, 2 and 3 respectively. The positive impact on average wages could be due in part to firms having to meet the JGI eligibility criterion of expanding their local workforce paid a monthly wage of at least $1,400.

Exhibit 6: Impact of the JGI on Firm-level Local Employment Outcomes, by JGI Phase

Outcomes Examined	Estimated Average Impact for:		
	Phase 1 September 2020 – February 2021	Phase 2 March 2021 – August 2021^	Phase 3 October 2021 – February 2022^
Change in number of local gross hires per firm per month	0.3 count***	0.18 count***	0.14 count***
Average wages of local gross hires at the firm level	13.3%***	13.6%***	12.1%***
Share of mature workers (aged 40 & above) among local gross hires at the firm level	1.9%-pt**	0.6%-pt	0.7%-pt

^ The analysis for Phase 2 did not cover September 2021 while the analysis for Phase 3 did not cover March 2022 as the JGI payout data for these months were not available at the time when the respective analyses were conducted..
Source: Authors' estimates.

Third, we find a modest positive impact on the share of mature workers among local gross hires. In Phase 1, JGI-supported firms registered a 1.9 percentage-point increase in the share of mature workers hired compared to their control group. This increase was largely driven by strong hiring effects in the first month following the implementation of JGI Phase 1. The effects were positive but statistically insignificant in Phases 2 and 3.

CONCLUSION

The findings of our study suggest that JGI Phases 1 to 3 were successful in encouraging firms to expand their local workforce, which in turn supported the recovery of the labour market from the effects of the pandemic. Between September 2020 and February 2022, the JGI scheme was associated with an increase of about 90,200 local hires cumulatively. At the same time, local hires also benefitted from wages that were 12.1 per cent to 13.6 per cent higher on average. Furthermore, there was evidence that the scheme supported a modest increase in the hiring of mature workers in Phase 1.

Given that the JGI is an exceptional scheme designed to support labour market recovery during a crisis, its positive effects on supporting local hires were the strongest as the economy was emerging from the pandemic-induced recession and when labour market slack was the most severe. As the economic recovery gained momentum and labour market slack dissipated, the positive effect on local gross hires expectedly waned. The JGI is assessed to have achieved its objectives with the labour market having largely recovered to pre-pandemic (2019) levels by 4Q2022.

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